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APPENDIX.
Volume I.

IN THE

Supreme Court of the United States

October Term, 1968
No. 56

LEAR, INCORPORATED,

Petitioner,

vs.

JOHN S. ADKINS,

Respondent.

ON WRIT OF CERTIORARI TO THE SUPREME COURT
OF THE STATE OF CALIFORNIA

Petition for Certiorari Filed April 9, 1968
Certiorari Granted May 20, 1968

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Relevant Docket Entries

IN THE SUPERIOR COURT FOR THE STATE OF CALIFORNIA
IN AND FOR THE COUNTY OF LOS ANGELES
CIVIL CASE NO. 737,267

DATE	LOCATION IN RECORD	DOCKET ENTRY
January 5, 1960	(C.T. B-1)	Complaint filed
February 9, 1960	(C.T. B-25)	Answer of Lear, Incorporated filed
May 31, 1963	(C.T. 143)	Amended Answer filed
October 28, 1963	(C.T. 924)	Pretrial Conference held and Minute Order thereon filed
January 3, 1964	(C.T. 1125)	Joint Statement of Matters Agreed Upon for Regular Pretrial Hearing filed (lodged on October 22, 1963)
January 20, 1964	(C.T. 1400)	Pretrial Conference Order dated November 14, 1963 filed
January 20, 1964	(C.T. 1403)	Separate Statement of Plaintiff's Legal and Factual Contentions and of All Issues Remaining in Dispute filed (lodged on October 22, 1963)
January 20, 1964	(C.T. 1423)	Separate Statement of Defendant of Law and Motion Matters and of Agreed or Admitted Matters for Regular Pretrial Hearing filed (lodged on October 22, 1963)
January 20, 1964	(C.T. 1430)	Separate Statement of Defendant of Legal and Factual Contentions as to Issues Remaining in Dispute for Regular Pretrial Hearing filed (lodged on October 22, 1963)
January 29, 1964	(C.T. 1487)	Minute Order ordering that the lawsuit involves matters only to May 31, 1963 filed
February 4, 1964	(C.T. 1497)	Second Amended Answer of Lear, Incorporated filed
March 12, 1964	(C.T. 1614)	Jury partially impanelled and Minute Order thereon filed
March 13, 1964	(C.T. 1615)	Jury Impanelled and sworn and Minute Order thereon filed
Mar. 13 to April 9, 1964	(C.T. 1615-1626, 1638-1642, 1651, 1652, 1669)	Testimony given and Minute Orders during trial filed

DATE	LOCATION IN RECORD	DOCKET ENTRY
March 20, 1964	(C.T. B-165)	Notice of Appeal concerning apportionment of cost of audit filed by plaintiff
April 8, 1964	(C.T. 1653)	Notice of Motion for Leave to File An Amended Answer to Conform to Proofs During the Pendency of the Trial Herein filed
April 8, 1964	(C.T. 1652)	Minute Order granting defendant's Motion to File Amended Answer to Conform to Proofs filed
April 20, 1964	(C.T. 1712)	Jury partially instructed, partial final arguments by plaintiff and defendant, and Minute Order thereon filed
April 21, 1964	(C.T. 1713)	Plaintiff and defendant concluded final argument and Minute Order thereon filed
April 22, 1964 to May 1, 1964	(C.T. 1714 to 1721)	Jury deliberates, and Minute Orders thereon filed
May 1, 1964	(C.T. 1724)	Verdict filed
May 1, 1964	(C.T. 1722)	Defendant's Notice of Motion for an Order for a Judgment Notwithstanding the Verdict Made Before Entry of Judgment, and Reserving the Right to Move for a New Trial Pursuant to CCP 629 filed
May 4, 1964	(C.T. 1725)	Judgment on Verdict in Open Court entered
May 15, 1964	(C.T. 1947)	Notice of Motion for Order Granting New Trial in the Alternative for an Order for Judgment for Defendant Notwithstanding the Verdict filed
June 12, 1964	(C.T. 2075)	Defendant's Motion for Judgment Notwithstanding the Verdict, and New Trial called for hearing and Minute Order thereon filed
July 2, 1964	(C.T. 2079-2088 and 2078)	Rulings on Motions for Judgment Notwithstanding the Verdict and in the Alternative, for a New Trial and Minute Order thereon filed
July 3, 1964	(C.T. 2093)	Notice of Appeal concerning the directed verdict and the denial of Judgment Notwithstanding the Verdict with respect to the Model 2156 Gyro filed by defendant

DATE	LOCATION IN RECORD	DOCKET ENTRY
July 20, 1964	(C.T. 2089)	Judgment for Defendant Notwithstanding the Verdict filed
July 21, 1964	(C.T. 2106)	Notice of Appeal concerning the Judgment for defendant notwithstanding the verdict and the granting of a new trial filed by plaintiff
August 14, 1964	(C.T. 2365)	Notice of Appeal concerning the Minute Order dismissing plaintiff's second cause of action filed by plaintiff
August 21, 1964	(C.T. 2124)	Notice of Appeal from the Judgment on Verdict in Open Court filed by defendant
December 30, 1964	(C.T. 2388)	Amendment to Judgment entered
January 29, 1965	(C.T. 2389)	Notice of Appeal from the Amendment to Judgment filed by plaintiff
February 26, 1965	(C.T. 2450)	Notice of Appeal from the Amendment to Judgment with the exception of the dismissal of the second cause of action and a consolidation of previous notices of appeal filed by defendant

IN THE DISTRICT COURT OF APPEAL FOR THE STATE OF CALIFORNIA 2ND CIVIL NOS. 28624, 29770, 30052, 30089

DATE	DOCKET ENTRY
December 7, 1965 to April 28, 1966	Briefs filed
May 12, 1966	Oral argument presented
August 8, 1966	Opinion filed
August 23, 1966	Petition for Rehearing by Plaintiff filed
August 23, 1966	Petition for Rehearing by Defendant filed
August 31, 1966	Lear's Answer to Adkins' Petition for Rehearing filed
August 31, 1966	Adkins' Answer to Lear, Incorporated Petition for Rehearing filed
September 2, 1966	Modification of Opinion and Denial of Petitions for Rehearing filed

IN THE SUPREME COURT OF THE STATE OF CALIFORNIA L.A. NOS. 29204, 29205, 29206, AND 29207

DATE	DOCKET ENTRY
September 17, 1966	Petition for Hearing by Plaintiff filed
September 27, 1966	Lear's Answer to Adkins' Petition for Hearing filed
October 19, 1966	Order Granting Petition for Hearing filed
June 5, 1967	Oral argument
December 14, 1967	Opinion filed
December 29, 1967	Petition for Rehearing by Defendant filed
January 9, 1968	Answer to Petition for Rehearing filed
January 11, 1968	Petition for Rehearing denied
January 15, 1968	Remittitur issued
January 16, 1968	Application for Stay of Execution of Judgment Rendered by this Court on December 14, 1967, which Became Final on January 15, 1968 filed
January 22, 1968	Response to Application for Stay of Execution of Judgment filed
January 24, 1968	Order filed Granting the Application for Stay of the Enforcement of Orders and Judgments and staying the orders and Judgments providing a surety bond approved by a Superior Court judge is filed

IN THE SUPERIOR COURT FOR THE STATE OF CALIFORNIA IN AND FOR THE COUNTY OF LOS ANGELES CIVIL NO. 737,267

DATE	RELEVANT DOCKET ENTRY
January 17, 1968	Remittitur received from Supreme Court and filed
February 13, 1968	Surety Bond to Stay Enforcement of Orders and Judgments and the Decision of the Supreme Court of California approved and filed

Complaint for Breach of Contract and for Misappropriation.

In the Superior Court of the State of California, in and for the County of Los Angeles.

John S. Adkins, Plaintiff, vs. Lear, Incorporated, a corporation; and Doe I through Doe X Companies, Defendants. No. 73726.

Filed Jan. 5, 1960.

Plaintiff complains of defendants as follows:

FIRST CAUSE OF ACTION

I

Plaintiff is a resident of the City of Santa Monica, County of Los Angeles, State of California.

II

Defendant LEAR, INCORPORATED (hereinafter "Lear") is a foreign corporation, duly organized and existing under and by virtue of the laws of the State of Illinois, and has a regular and established place of business in the County of Los Angeles, State of California.

III

Defendants DOE I through DOE X COMPANIES are sued herein by said names which are fictitious for the reason that their true names and status are unknown to plaintiff, and plaintiff asks leave and permission of the court to amend his complaint by inserting the true names and states of said fictitious defendants when the same are ascertained. Plaintiff is informed and believes, and therefore alleges, that said fictitious defendants or one or more of them were authorized, licensed or permitted by defendant Lear to make, manu-

facture and sell the products, royalties on which under the terms of the agreement hereinafter set forth are payable and owing to plaintiff.

IV

Under date of December 29, 1951, plaintiff and defendant Lear entered into a written agreement providing, among other things, for the issuance of a license from plaintiff to defendant Lear for the manufacture by Lear of vertical gyros on a mutually satisfactory royalty basis from defendant Lear to plaintiff. A true and correct copy of said 1951 agreement is attached hereto as Exhibit I and is incorporated herein by this reference.

V

Within a few days after the making of said 1951 agreement, plaintiff was employed by defendant Lear and remained in such employ until February 1, 1958.

VI

Under date of September 15, 1955, while plaintiff was so employed by defendant Lear, plaintiff and defendant Lear entered into an extensive written license agreement implementing and supplementing said 1951 agreement. True and correct copy of said September 15, 1955 agreement (except for the exhibits thereto) is attached hereto as Exhibit 2 and is incorporated herein by this reference. Defendant Lear has in its possession copies of the exhibits to said Exhibit 2 which exhibits are voluminous and bulky. Said exhibits will be delivered for filing in court at such time as their use becomes necessary.

VII

Under the provision of said 1955 agreement, defendant Lear agreed, among other things, to pay plain-

tiff a royalty of 1¼% of the net sales price received by Lear or by entities controlled by Lear from products incorporating the inventions of plaintiff, as more specifically described in said 1955 agreement.

VIII

From and after September 15, 1955, to the date hereof, defendant Lear has manufactured and sold products, and continues to manufacture and sell products, for which royalties are payable to plaintiff, as set forth in said 1955 agreement.

IX

During and prior to the period of plaintiff's said employment with defendant Lear, plaintiff conceived, created and devised the inventions, ideas and discoveries referred to in said agreements of 1951 and 1955, and plaintiff made the same available to defendant Lear and said defendant became, was and is thoroughly familiar therewith.

X

Beginning on or about September 10, 1957, and continuing thereafter until the date hereof, defendant Lear has breached the aforesaid 1955 agreement in at least the following respects:

1. Said defendant, either alone or together with companies controlled by it (as defined in said 1955 agreement) has sold numerous products for which royalties are required to be paid to plaintiff, but has failed and refused to pay the same.

2. Said defendant has failed to account to plaintiff for such royalties and for such products as required under the terms of said 1955 agreement.

3. Said defendant has failed, neglected and refused to maintain its books and records and to make the same available for plaintiff's inspection, as provided in said agreement.

4. Said defendant has failed, refused and neglected to cure its aforesaid breaches, despite due and frequent notice thereof given to said defendant by plaintiff.

XI

Under date of April 8, 1959, defendant Lear purported to terminate said 1955 agreement, but nonetheless and in breach of plaintiff's rights, defendant Lear has continued and still continues to manufacture and sell products for which royalties are required to be paid to plaintiff, as provided in said 1955 agreement, but said defendant has failed and refused so to pay the same.

XII

Plaintiff has done everything on his part to be performed under said agreement except as his performance thereunder may have been excused or waived.

XIII

The aforesaid breaches by defendant Lear have resulted in damages to plaintiff in an amount which plaintiff cannot state with precision by reason of the fact that the primary records and data are in the possession of defendant Lear, but, as plaintiff is informed and believes and therefore alleges, is in excess of the sum of $100,000, no part of which sum has been paid and all of which is now due, owing and unpaid from defendant Lear to plaintiff.

XIV

Plaintiff further alleges that he will continue to suffer and incur damages from and after the date of filing hereof and that at the time of trial plaintiff be permitted to supplement this complaint to include such further damages which have accrued to the time of trial.

SECOND CAUSE OF ACTION

XV

Plaintiff refers to paragraphs I to XII, inclusive, of his first cause of action and incorporates each and all of the allegations of said paragraphs herein by this reference.

XVI

From the time of the making of the 1951 agreement to the termination of plaintiff's employment with defendant Lear in 1958, said defendant became thoroughly familiar with the new ideas, discoveries and inventions owned by plaintiff and related to the gyros to be fabricated by said defendant Lear.

XVII

During the course of plaintiff's lengthy employment with said defendant, a confidential relationship between plaintiff and said defendant came into being and existed by reason of the said employment relationship between the parties, the length thereof, and the nature of the field in which plaintiff and his said employer were working.

XVIII

In violation of plaintiff's ownership rights in said new ideas, discoveries and inventions and in violation of the confidential relationship between the parties, defendant Lear used, appropriated and profited from

plaintiff's said new ideas, discoveries and inventions and has failed and refused to pay plaintiff the reasonable value thereof.

XIX

By reason of said improper and illegal conduct of defendant Lear, plaintiff has been injured in the sum of $250,000, no part of which sum has been paid and the whole of which is now due, owing and unpaid.

XX

In doing the aforesaid illegal acts, defendant Lear was and is guilty of oppression and fraud, and plaintiff alleges and claims that, in addition to his actual damages, he is entitled to $250,000 in damages for the sake of example and by way of punishing said defendant Lear.

WHEREFORE, plaintiff prays judgment as follows:

1. For his damages under his first cause of action in such sum as may later be determined, but not less than $100,000;

2. For the sum of $250,000 in actual damages under his second cause of action, plus the sum of $250,000 as and for exemplary damages thereunder.

3. For plaintiff's costs of suit and for such other and further relief as may be proper and just.

Fulwider, Mattingly & Huntley
Beilenson, Meyer, Rosenfeld & Susman
By /s/ Walter P. Huntley
Attorneys for Plaintiff

EXHIBIT 1 (to the Complaint)

LEAR, Incorporated
LearCal Division

11916 West Pico Blvd.
Los Angeles 64, Calif.

December 29, 1951

AGREEMENT BETWEEN LEAR, INC. AND JOHN S. ADKINS

This agreement pertains to vertical gyros which are to be fabricated at Lear, Inc., under the supervision of John S. Adkins.

All physical instruments fabricated shall become the property of Lear, Inc.

All new ideas, discoveries, inventions, etc., related to said vertical gyros become the property of Mr. John S. Adkins.

Mr. John S. Adkins agrees to license Lear, Inc. to manufacture said vertical gyros on a mutually satisfactory royalty basis.

SIGNED:

/s/ Wm. P. Lear
Wm. P. Lear
For Lear, Incorporated

/s/ John S. Adkins
John S. Adkins

EXHIBIT 2 (to the Complaint)

AGREEMENT

THIS AGREEMENT, made and entered into this 15th day of Sept. 1955, by and between JOHN S. ADKINS of Santa Monica, California, hereinafter referred to as "Adkins" and LEAR, INCORPORATED a corporation of Illinois, hereinafter referred to as "Lear."

WITNESSETH:

(A) WHEREAS, Adkins represents and warrants that he owns United States Letters Patent No. 2,542,975, issued to him on February 27, 1951, for an Erecting Mechanism for Reducing Turn Errors in Vertical Gyroscopes, subject to a reservation that the invention described therein may be manufactured and used by or for the Government of the United States for governmental purposes without the payment of any royalty thereon, a copy of which Letters Patent is hereto attached and hereafter referred to as Exhibit "A" and incorporated herein as a part hereof; and Adkins represents that there are no outstanding licenses or agreements that prevent him from entering into a license agreement with respect to said Patent and the inventions covered therein, all as hereafter set forth; and

(B) WHEREAS, Adkins represents and warrants that to the best of his knowledge and belief he is the owner of the inventions covering the substantial claims as disclosed or intended to be disclosed in the Application for U. S. Patent on gyroscopes attached hereto and hereafter referred to as Exhibit "B" and incorporated herein as a part hereof, which application was filed on February 15, 1954, and is presently pending in

the United States Patent Office and that there are no licenses or agreements outstanding which prevent him from granting unto Lear an exclusive license respecting said inventions and products embodying said inventions, in accordance with the further provisions hereof, and

(C) WHEREAS, Adkins represents and warrants that to the best of his knowledge and belief he is the owner of the inventions disclosed or intended to be disclosed for a no-gimbal lock feature for a gyroscope as set forth in Disclosure I attached hereto and hereafter referred to as Exhibit "C" and incorporated herein as a part hereof, and that there are no licenses or agreements outstanding which prevent him from granting unto Lear an exclusive license respecting said inventions and products embodying said inventions, in accordance with the further provisions hereof; and

(D) WHEREAS, Lear is to acquire a non-exclusive license under said Exhibit "A" hereof and an exclusive license under any and all applications for patents and patents claiming the subject matter referred to in Exhibits "B" and "C" hereof, to manufacture and sell products embodying the respective inventions of said Exhibits "A", "B" and "C".

NOW, THEREFORE, in consideration of the foregoing and $500.00 in hand paid, receipt whereof is hereby acknowledged, and of the covenants and conditions hereinafter contained, it is hereby agreed by and between the parties hereto as follows:

1. DEFINITIONS:

(a) The phrase Exhibit "A", as used in this agreement shall be deemed to refer to and include United

States Letters Patent No. 2,542,975 and all renewals, extensions and reissues thereof, issued on the subject matter of said letters patent and all improvements thereof.

(b) The phrase Exhibit "B" as used in this Agreement shall be deemed to refer to and include the application for United States Letters Patent filed on February 15, 1954, attached hereto, and all continuations and divisions thereof, and all patents issued or issuing thereon to Adkins with respect to the inventions disclosed or intended to be disclosed therein and all improvements thereof, and all renewals, extensions, reissues of any patents issued pursuant thereto.

(c) The phrase Exhibit "C" as used in this Agreement shall be deemed to refer to and include Disclosure I attached hereto and all applications for United States Letters Patent filed with respect to the inventions disclosed or intended to be disclosed therein, and all improvements thereon and all continuations and divisions of all such applications and all patents issued or issuing with respect thereto and all renewals, extensions, and reissues thereof.

(d) The Term "said inventions" as used in this Agreement shall include (1) all claims and inventions disclosed or claimed in said Exhibit "A", and (2) all claims and inventions disclosed or intended to be disclosed in said Exhibit "B" and (3) all claims and inventions disclosed or intended to be disclosed in said Exhibit "C", but only to the extent that such claims or inventions mentioned in said Exhibits are patented or patentable by Adkins.

(e) The term "gyro assembly" as used herein is defined as the cased instrument which intimately con-

tains the gyro structure and other appurtenances necessary for proper operation of the gyro structure, all of which are included within the gyro assembly case. The term "gyro structure" as used herein is defined as the high-speed gyro rotor, gimbals, frame and attachments thereto.

(f) The term "gyro system" as used herein is defined as the "gyro assembly" and components or accessories necessary to produce earth and/or aircraft gyro signals for use by other equipment such as indicators, autopilots, bombing systems, fire control systems, etc., which such other equipment such as indicators, autopilots, bombing systems, fire control systems, so using the gyro system signals shall not be considered as part of the gyro system.

(g) In determining whether any particular component or accessory constitutes a part of the gyro assembly or gyro system, the test shall be to ascertain whether removal of the particular component or accessory affects the accuracy of the gyro assembly or gyro system signals. If removal does affect the accuracy of the gyro assembly or gyro system signal, the component or accessory removed shall be deemed a part of the gyro assembly or the gyro system, but if removal does not affect the accuracy of such signal, then it shall not be deemed a part of the gyro assembly or gyro system.

(h) Whenever in this Agreement the words "claim", "claims", "invention", or "inventions" are used, in accordance with the context of the terms of the Agreement, the plural shall apply to the singular or the singular shall apply to the plural.

2. GRANT.

(a) Subject to the provisions for termination hereinafter set forth, Adkins hereby gives and grants unto Lear (1) a non-exclusive right and license under all the claims of said Exhibit "A" and (2) an exclusive license under all the claims of said Exhibits "B" and (3) an exclusive license under all the claims of said Exhibit "C", to manufacture or have manufactured for it, use and sell products and parts and components thereof (including gyros, gyro systems, gyro apparatus and gyro mechanisms) covered by or containing one or more or all of the inventions and any patents issued or hereafter issued thereon and any divisions, continuations or reissues thereof, and all modifications and improvements thereof, throughout the United States and all foreign countries; it is understood, however, that whenever the word "claims" is used in this paragraph it shall mean the claims in the respective Exhibits which have been patented or will be patentable by Adkins. Lear shall have the right on ninety days' prior written notice to Adkins, to terminate any one or more of the licenses herein granted.

(b) Lear at its option and expense may, for and in the name of Adkins, file applications for patents in any foreign countries for any of the inventions licensed herein except those under Exhibit "A". In the event Adkins desires to have an application for a patent respecting such inventions filed in any designated foreign country he shall so notify Lear in writing. Lear shall thereupon have ninety days from and after receipt of such notice, to determine whether it wishes to file such application in the country designated; and if within said period it so files at its expense, it shall retain and

have the exclusive right and license to use said inventions in the manufacture and sale of products embodying such inventions in such foreign country. However, if it elects not to so file an application and thereafter Adkins files an application in such foreign country at his expense, then from and after the date of the issuance of the patent, Lear shall have a non-exclusive right and license to use the inventions described in said patent so issued, in the manufacture and sale of products embodying such inventions in such foreign country.

(c) This agreement shall continue in force and effect until the expiration of the last to expire of any patent now or hereafter issued and related to the subject matter of this agreement, including all continuations, renewals, extensions and reissues thereof, unless terminated sooner by act of the parties pursuant to the provisions hereof.

3. ROYALTIES.

(a) While one or more of the licenses granted under this Agreement is in effect, Lear agrees to pay Adkins with respect to products incorporating said inventions manufactured and sold under those licenses that are in effect, royalties of 1¼% based on net sales prices as hereinafter in sub-paragraphs (c), (d) and (j) defined, received by Lear for said products, it being understood that said rate shall be paid only on products incorporating one or more or all of said inventions.

(b) No royalties shall be computed or paid on account of the manufacture by or for or sale to, on behalf of, or for the use of the U. S. Government, of products which incorporate only the inventions disclosed in or covered by Exhibit "A".

(c) Net sales prices on which royalties are payable shall be the final sales price established for the products sold after price adjustment or price redetermination whether voluntarily or by contract. In the case of cost reimbursement contracts, the final price shall be the costs finally allowed and paid to Lear. In the event the final price is higher than the initial or interim price, Lear will pay to Adkins the additional royalties due him upon determination of such final higher price. In the event the final price is lower than the initial or interim price, Lear shall deduct from future royalties thereafter payable to Adkins, an amount equal to 25% of each future royalty payment subsequently becoming due, until it shall have received the full amount of the excess royalties theretofore paid to Adkins.

(d) Net sales prices with respect to the sales of products incorporating inventions licensed hereunder and also containing other assemblies or components in addition thereto which do not incorporate the said inventions, shall for the purposes of determining royalties payable to Adkins, be the price established in each such contract for the "gyro assembly" or "gyro system" as hereinbefore defined which incorporates the inventions herein licensed. Where no separate price is established in any such contract for the "gyro assembly" or "gyro system", net sales price of such "gyro assembly" or "gyro system" shall be the price charged by Lear, under each such contract, for a spare "gyro assembly" or "gyro system" which incorporates the inventions herein licensed. Where there is no price established for such gyro assembly or gyro system in any such contract, either initially or as a spare part, then the net sales price of the gyro assembly or gyro system on

which royalties are paid, shall be that part of the price of the entire product, which the cost of manufacture of the gyro assembly or gyro system incorporating the inventions, bears to the cost of manufacture of the entire product.

The following specific examples will serve to illustrate the method of determining which items shall be included in computing net sales price on which royalties are based:

(1) In a VGI utilizing any one or more of the inventions, the royalty shall be computed on the net sales price of the "gyro system" which is the Type K-4 control. The indicator is not included in computation of net sales price since if the indicator is removed, the accuracy of the gyro system signals would not be affected.

(2) In compass systems, such as the Lear Type 1284, utilizing any one or more of the inventions, the royalty shall be computed on the net sales price of the complete "compass system", except for the earth's magnetic detector and the indicators, since if the earth's magnetic detector and indicator are removed, the accuracy of the gyro assembly signals as such would not be affected.

(3) In indicator systems such as the NAFLI, utilizing any one or more of the inventions, the royalty shall be computed on the net sales price of the "gyro assembly." The basic purpose of the NAFLI system is to provide indication, and the system other than the "gyro assembly" will not be included in the amount on which the royalty is computed, since if all components of the NAFLI system other than the "gyro assembly" are removed, the accuracy of the "gyro assembly" signals as such would not be affected.

(4) In auto pilots such as the Type F-5, utilizing any one or more of the inventions, the royalty shall be computed on the net sales price of the "gyro assembly." The basic purpose of the F-5 auto pilot is to control the aircraft, and the system other than the "gyro assembly" will not be included in the amount on which the royalty is computed, since if all components of the F-5 auto pilot other than the "gyro assembly" are removed, the accuracy of the "gyro assembly" signals as such would not be affected.

(e) It is specifically recognized and agreed by the parties hereto that prior to January 1, 1955, no sales were made by Lear of any products under the licenses herein granted or subject to royalty as herein provided. Lear shall submit to Adkins a full and correct statement of the net sales prices received on all sales by it of products subject to royalty under the licenses herein granted which are then in effect during each quarter-annual period beginning January 1, 1955. For the purposes of this Agreement, quarter-annual periods are defined as follows: the first quarter-annual period shall be the months of January, February, March; the second shall be April, May, and June; the third, July, August, and September; and the fourth, October, November, and December. Lear shall submit the said statement for each quarter-annual period within sixty days after the end of each quarterly period, that is, within sixty days after March 31st, June 30th, September 30th and December 31st of each year, and each statement submitted shall be accompanied by payment in full for royalties shown due. The first such statement to be made under this Agreement shall be submitted to Adkins within sixty days after Sept. 15, 1955, covering

the period from January 1, 1955, through Sept. 30, 1955.

(f) If any products subject to royalty are sold by Lear to any person, firm, or corporation in which Lear has any direct or indirect pecuniary interest in excess of 50% of the total capital and surplus of such person, firm, or corporation, and said products shall be resold by said purchaser at a price greater than Lear's sales price, then in the computation of royalties due hereunder, the net resale price received by said purchaser on resales of said products shall be taken as Lear's net sales prices received for said products.

(g) Unless this Agreement is sooner terminated as herein provided, Adkins shall be entitled to receive a minimum royalty in the sum of $250.00 upon execution hereof, and on January 1, 1956, and a minimum royalty in the sum of $500.00 on January 1, 1957, and on January 1st of each year thereafter that this Agreement is in effect, on account of each of the following groups of products manufactured and sold by Lear, (provided the Licenses as to Exhibits A, B, and C, respectively, are in force and effect), (a) embodying the inventions of Exhibit "A"; (b) embodying the inventions disclosed or intended to be disclosed in Exhibit "B" and (c) embodying the inventions disclosed or intended to be disclosed in Exhibit "C". The payments made under this paragraph shall be applied as a credit in reduction of the royalty payments due Adkins under this Paragraph 3, for such year. If said minimum royalties are not paid, then the only right of Adkins shall be to cancel, such one of the Licenses herein granted, for which minimum royalty payments as above provided for have not been paid by Lear. After receipt

of notice of cancellation of such License, Lear shall have no further right to manufacture products incorporating the inventions disclosed under such cancelled License, except that Lear may for a period of ninety days from and after such notice of cancellation complete the manufacture and sell any of such products then in process or on hand, and Adkins shall receive his royalty on all of such products as in Paragraph 3 hereof provided. Nothing herein set forth shall be deemed to obligate Lear to manufacture, produce or sell any products embodying inventions described and set forth in Exhibits "A", "B" and "C" hereof. If during any one full year beginning after January 1, 1959, the total annual net sales prices of products sold embodying said inventions as herein defined, either separately or in combination, do not exceed $35,000.00 under the licenses herein granted, then unless such failure is the result of war, act of God, strikes, national emergency, governmental rules or regulations or any other cause beyond Lear's control, said licenses with respect to inventions contained in Exhibits "B" and "C" shall thereafter become non-exclusive licenses instead of exclusive licenses as herein granted.

(h) If under the terms hereof Lear cancels its license under the inventions contained in Exhibit "C", then the license granted with respect to the inventions contained in Exhibit "B" shall continue as an exclusive license. In such event Adkins shall thereafter have the right to use and to license others to use, the inventions contained in said Exhibit "B" but only in products which also embody in combination the inventions disclosed in Exhibit "C". Adkins, however, shall have no right to use or to license others to use the inventions

contained in Exhibit "B" in the manufacture or sale of any products unless such products also incorporate the inventions disclosed in Exhibit "C".

(i) deleted.

(j) The term "net sales price" wherever used herein shall not include the amount of any tax, insurance, duty, packing, shipping, or crating charge or any other similar items, which are separately indicated and charged in the agreement or invoice, or of which written notice is given to Adkins.

4. BOOKS AND REPORTS

Lear agrees to keep accurate and complete books and reports showing in detail all said products made and sold by it under the licenses herein granted, and agrees that said books and records relating only to sales of said products shall be open for inspection, subject to any security regulations of the United States Government, by Adkins or a Certified Public Accountant selected by him, during normal business hours, but no oftener than twice a year. In the event that any royalty payment is based upon Lear's cost of manufacture, as in Paragraph 3(d) hereof provided, then in such event Adkins shall have the right, subject to any security regulations of the United States Government, to be exercised only once with respect to any such royalty computation, to inspect Lear's books and records relating only to the cost of manufacture of that specific product, the royalty for which was computed upon Lear's manufacturing cost. Adkins agrees that neither he nor such Certified Public Accountant selected by him will disclose to any person, firm, company, or corporation any information or knowledge which may be obtained from

or disclosed in any books and records of Lear, and Adkins further agrees that he and such Certified Public Accountant will treat all of such information and knowledge as confidential. Lear agrees that, on or before the dates above specified for payment of royalties to Adkins, it will deliver to Adkins complete reports showing in detail all items covered by said royalty payments and how the royalties in each case have been computed.

5. SUITS FOR INFRINGEMENT.

In the event that any third party or parties shall institute suit against Lear asserting that the manufacture, sale or use by Lear of products under the licenses herein granted, constitutes an infringement of a patent or patents owned by the plaintiff or plaintiffs in such suit, then Lear shall place in escrow all further royalty payments due or payable to Adkins (including Minimum Royalty Payments) under this Agreement with respect to the license involved, from the time of the institution of such suit until such suit shall be finally terminated. Lear shall have the right but shall not be obligated to defend such suit; and if Lear successfully defends such suit, it shall bear the cost of such defense, but if Lear unsuccessfully defends the suit, then Lear shall be reimbursed from the escrow account by an amount equal to the costs, attorneys, and other fees, judgments and other expenses Lear incurred due to such suit, less the amount it may be awarded and collect from the said plaintiff or plaintiffs, and any residue from the escrow account shall then be paid to Adkins. However, Adkins shall not be required to reimburse Lear beyond the amount of the escrow account at the suit termination for any such costs, fees, and other expenses.

6. INVALID PATENTS.

In the event that patent No. 2,542,975, attached hereto as Exhibit "A" is held invalid or in the event the U.S. Patent Office refuses to issue a patent on the substantial claims of the application attached as Exhibit "B", or if such a patent so issued is subsequently held invalid, or in the event an application for U.S. Patent is filed on the inventions contained in Exhibit "C" and the United States Patent Office refuses to issue a patent on the substantial claims thereof or if such a patent so issued is subsequently held invalid, then in any of such events Lear at its option shall have the right forthwith to terminate the specific license so affected or to terminate this entire Agreement and no further royalties shall thereupon be payable under the license so terminated or under this Agreement if Lear shall have elected to terminate this Agreement in its entirety.

7. MARKING.

Lear agrees to place the required statutory patent notice upon each and every one of said products licensed hereunder.

8. BANKRUPTCY.

If Lear shall be declared a bankrupt or insolvent, or make any assignment for the benefit of creditors, or have a receiver appointed, and if such receiver is not removed within 120 days, then such act or event may, at the option of Adkins, be considered as a material breach of this Agreement, and said agreement may thereafter be terminated by Adkins forthwith.

9. PROSECUTION OF PATENT APPLICATIONS.

As part of the consideration for the licenses herein granted, Lear agrees to pay to Adkins $540.00 on execution hereof, to reimburse him for patent costs already incurred by him, and Lear further agrees to pay all costs hereafter incurred for preparation and prosecution of all applications for patents on inventions set forth and disclosed in Exhibits "B" and "C" hereof, provided Adkins has secured the prior written approval of Lear therefor. Adkins agrees with due diligence to file and prosecute applications for United States letters patent covering all said inventions and shall submit all such applications to Lear for approval prior to the filing thereof. Adkins further agrees that if Lear desires to prepare said patent applications then at Lear's request he will assist Lear in the preparation thereof and will cooperate fully in all matters relating thereto with Lear or its patent counsel and will execute all papers and take all rightful oaths and Adkins shall immediately upon receipt by him, furnish to Lear a copy of each action taken by the U.S. Patent Office with respect to such applications and to consult with Lear before taking any action with respect thereto, and also to notify Lear when a patent or patents have issued.

10. TERMINATION.

(a) If Lear shall default in the payment of any minimum or earned royalties hereunder or in the furnishing of any reports required by this Agreement, and shall not cure such default within thirty days after written notice thereof has been given to Lear, or shall breach any other terms of this Agreement and shall not cure such other breach within sixty days after written

notice thereof has been given to Lear, then Adkins may, by written notice, terminate this Agreement forthwith after the expiration of said respective thirty-day or sixty-day periods, if any such default is not cured.

(b) Failure to terminate this Agreement for any breach shall not be construed as a waiver of the right so to do for any continuation or repetition of said breach, or any subsequent breach of the same or dissimilar nature.

11. EMPLOYMENT.

It is understood that Adkins has been employed by Lear prior to this date and will continue in its employ after this date pursuant to an employment agreement entered into simultaneously herewith. It is further understood that if hereafter the employment of Adkins shall terminate for any reason whatsoever then in such event this License Agreement shall continue in full force and effect in accordance with all of the terms hereof and subject only to the following additional conditions:

Within fifteen (15) days after the expiration of six full months from the date of termination of the employment of Adkins, Lear shall notify Adkins in writing, that it exercises one of the following four options:

A. To agree that Adkins shall be entitled to receive a minimum royalty at the rate of $15,000.00 annually beginning after the expiration of said six full months from the date of termination of the employment of Adkins, in which event the license herein granted with respect to Exhibit "A" shall continue as a nonexclusive license, and the licenses herein granted with respect to Exhibits "B" and "C", shall continue as exclusive licenses with Lear.

B. To agree that Adkins shall be entitled to receive a minimum royalty at the rate of $10,000.00 annually beginning after the expiration of six full months from the date of termination of the employment of Adkins, in which event the license herein granted with respect to Exhibit "B" shall continue as an exclusive license with Lear, and the licenses granted with respect to Exhibits "A" and "C" shall continue as non-exclusive licenses with Lear.

C. To agree that Adkins shall be entitled to receive a minimum royalty at the rate of $5,000 annually, beginning after the expiration of six full months from the date of termination of the employment of Adkins; in which event the license herein granted with respect to Exhibit "C" shall continue as an exclusive license with Lear, and the licenses granted with respect to Exhibits "A" and "B" shall continue as non-exclusive licenses with Lear.

D. To agree that Adkins shall not be entitled to receive any minimum royalty (except only that provided by paragraph 3 (g)) but rather only actual earned royalties, beginning after the expiration of six full months from the date of termination of the employment of Adkins, in which event the licenses herein granted with respect to Exhibits "A", "B", and "C" shall continue as non-exclusive licenses with Lear.

If Lear exercises option A or option B or option C above, then in such event, if the earned royalties payable for any quarter-annual period thereafter (as the quarter-annual periods are defined in Paragraph 3 hereof) are less than ¼ of the annual minimum royalties specified in the option which Lear exercises, Lear shall pay the difference between the earned royalties for such

quarter-annual period and the amount equal to one-fourth of the said annual minimum royalty; provided however, that excess earned royalties in any previous quarter-annual period shall be applied and carried forward to succeeding quarter-annual periods, and provided further that in determining royalties payable to Adkins for the final October, November, and December quarter-annual period of each calendar year, a readjustment or recomputation shall be made, so that Lear shall receive full credit against the minimum annual royalties for all amounts theretofore paid by Lear in such calendar year, either to cover earned royalties or to cover deficits in royalties for prior quarter-annual periods in such calendar year; and if royalties actually earned by Adkins during any such calendar year exceed the annual minimum royalties, then any excess payments made by Lear during such year, not representing royalties actually earned by Adkins, shall be carried forward and be credited against royalties becoming due for subsequent quarter-annual periods.

In the event Lear shall exercise option A, then within ten days after the end of any quarter-annual period thereafter, Lear shall have the further right and option to notify Adkins, that it cancels the exercise of option A and in lieu thereof, adopts and exercises option B or option C or option D above, beginning with the quarter in which such notice is given. It is further understood that if option B is at any time exercised by Lear, then within ten days after the end of any quarter-annual period thereafter, Lear can by notice in writing to Adkins, cancel the exercise of option B and in lieu thereof adopt and exercise option C or option D beginning with the quarter in which such notice is given. It is

further understood that if option C is at any time exercised by Lear, then within ten days after the end of any quarter-annual period thereafter Lear can by notice in writing to Adkins, cancel the exercise of said option C and in lieu thereof adopt and exercise option D beginning with the quarter in which said notice is given. If, as a result of the exercise of any option by Lear, any license becomes non-exclusive, then in such event Lear cannot thereafter exercise any option which will change such non-exclusive license so that the same would become exclusive, except upon securing the consent of Adkins.

In the event Lear fails to notify Adkins in writing that it exercises one of said options A, B, C or D within fifteen (15) days after expiration of six full months from the date of the termination of the employment of Adkins, then it shall be deemed that option D has been exercised by Lear.

12. PATENT INFRINGEMENT SUIT.

In case Adkins and Lear shall agree that suit shall be commenced against any third party for infringement of any patents, claims or inventions embodied under this Agreement, then all costs and expenses, including counsel fees, incurred in prosecuting such suit shall be borne one-half by each. If such suit shall result in a final award of damages, the net proceeds received as a result of said suit after deducting all costs and other expenses, including counsel fees (for which Adkins and Lear shall be reimbursed) incurred in prosecuting such suit, shall be divided one-half to Lear and one-half to Adkins.

13. PREVIOUS AGREEMENT.

This Agreement cancels and supersedes the Agreement between the parties hereto dated December 29, 1951, and any and all other agreements between the parties hereto, entered into prior to the date hereof and relating to any inventions, discoveries or patents of Adkins or otherwise.

14. NOTICES.

Any notice hereunder must be in writing and shall be given by registered mail, postage prepaid. For the purposes of notices under this Agreement the address of Adkins shall be:

468 Twenty-first Street
Santa Monica, California

and the address of Lear shall be:

3171 South Bundy Drive
Santa Monica, California
Attn: Richard M. Mock, President

Either party may, at any time, by thirty days' notice in writing, to the other, designate any other address in place of those specified above.

15. SUCCESSION.

Neither this Agreement nor any of its benefits nor the licenses, rights, or privileges herein granted shall be directly or indirectly, by operation of law or otherwise, assigned, transferred, divided, or shared by Lear without the prior written consent of Adkins. However, this Agreement may be assigned or tranferred by Lear to any subsidiary or to any corporation with whom Lear may merge or consolidate or which acquires the major assets or instrument product business of Lear; and this

Agreement may be assigned or transferred by Adkins and his heirs and assigns.

16. APPLICABLE LAW.

It is agreed that the laws and decisions of the State of California, wherever applicable, shall be followed in interpreting and deciding any questions arising from this Agreement.

17. LIST OF PRODUCTS.

It is hereby specifically agreed and understood by the parties that on the date of execution hereof the MA-1 compass Lear Model No. 5005, the Directional Steel Gyro Lear Model No. 2152, and the Vertical Steel Gyro Lear Model No. 2153, are the only products manufactured by Lear under the licenses herein granted, which contain any of the inventions or claims described and covered by the respective Exhibits under this Agreement. As and when additional products are manufactured by Lear under the licenses herein granted and which contain any of the inventions or claims described and covered by the respective Exhibits under this Agreement, Lear agrees to so notify Adkins and to identify the product or item by a model number or identification number, and specify which invention is incorporated or used therein, with respect to the respective Exhibits. Lear shall furnish such list of all items, as aforesaid, to Adkins not later than 30 days after the commencement of the manufacture of any new item incorporating any of the inventions, as aforesaid, provided however, that nothing herein contained shall require Lear to furnish any information to Adkins which Lear is prohibited from disclosing under the terms of any Government contracts.

18. RENEGOTIATION.

This Agreement shall be deemed to be subject to and be deemed to contain all required provisions of the Renegotiation Act of 1951 as it may be amended or extended, or any other Renegotiation or similar Act in effect during the term of this Agreement.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in duplicate on the dates set opposite their respective signatures.

Witness:

Robert H. Bloomberg	John S. Adkins JOHN S. ADKINS
Philip E. Golde Secretary	LEAR, INCORPORATED By Richard M. Mock

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Second Amended Answer of Lear, Incorporated.

Original Filed Feb. 4, 1964 County Clerk.

In the Superior Court of the State of California, for the County of Los Angeles.

John S. Adkins, Plaintiff, v. Lear, Incorporated et al, Defendants. No. 737,267.

LEAR, INCORPORATED, separating itself from its co-defendants, severally answers plaintiff's complaint by admitting, denying and alleging as follows:

ANSWER TO FIRST CAUSE OF ACTION

I.

Denies paragraphs 1 and III for lack of information or belief.

II.

Answering paragraph IV admits that on or about December 29, 1951, a document (copy of which is at-

tached as Exhibit 1 to the complaint) was signed by the persons whose names appear thereon and that the legal effect of the document was as stated therein and not otherwise. Alleges that on or about September 15, 1955, said document was cancelled and superseded by a written agreement entered into between plaintiff and defendant.

Denies each and every remaining allegation in paragraph IV.

III.

Answering paragraph V admits that plaintiff was employed by defendant from January 2, 1952, to and including January 31, 1958.

Denies each and every remaining allegation in paragraph V.

IV.

Answering paragraph VI, admits that on or about September 15, 1955, plaintiff and defendant entered into a written agreement and that a true copy of said agreement (except for the exhibits thereto) is attached to the complaint and marked Exhibit 2, and that defendant has in its possession copies of the exhibits to said Exhibit 2. Denies specifically that said agreement of September 15, 1955, implemented or supplemented said 1951 agreement or any agreement.

Denies each and every remaining allegation in paragraph VI.

V.

Answering paragraph VII alleges that the provisions of said agreement of September 15, 1955, are in writing and that the terms thereof are as set forth therein and not otherwise.

Denies each and every remaining allegation in paragraph VII.

VI.

Denies each and every allegation in paragraphs VIII, IX, X, XII, XIII, and XIV.

VII.

Answering paragraph XI admits that on or about April 8, 1959, it terminated said September 15, 1955 agreement.

Denies each and every remaining allegation in paragraph XI.

AS A SECOND AND SEPARATE DEFENSE, DEFENDANT ALLEGES:

VIII.

The complaint is barred by the provisions of §339, Subdivision 1 of the Code of Civil Procedure.

ANSWER TO SECOND CAUSE OF ACTION

IX.

Answering paragraph XV, defendant refers to and by this reference incorporates herein paragraphs I through VII hereof.

X.

Denies each and every allegation contained in paragraphs XVI, XVIII, XIX, and XX.

XI.

Answering paragraph XVII, defendant alleges that the only confidential relationship existing between plaintiff and it during the term of plaintiff's employment by it was a confidential relationship owing by plaintiff to defendant. Specifically denies that any confidential relationship was owing from defendant to plaintiff.

Denies each and every remaining allegation in paragraph XVII.

AS A SECOND AND SEPARATE DEFENSE, DEFENDANT ALLEGES:

XII.

The complaint is barred by the provisions of §339, Subdivision 1 of the Code of Civil Procedure.

THIRD AND SEPARATE DEFENSE

As a third and separate defense defendant alleges that the causes of action are void and unenforceable because plaintiff released defendant from all claims and demands of liability arising in any way whatsoever in that:

I.

The plaintiff and defendant on September 15, 1955, entered into an employment agreement whereby plaintiff expressly released defendant of, and from any and all claims, demands and liabilities of every kind which plaintiff ever had or had on September 15, 1955, against defendant, by reason of any matter or thing from December 29, 1951 to September 15, 1955 including expressly (but not by way of limitation) all claims and demands arising out of or in connection with the plaintiff's employment prior to September 15, 1955, and all claims and demands arising out of or in connection with the written agreement of December 29, 1951 (Exhibit 1 to the complaint), all as more specifically set forth in said employment agreement. A true and correct copy of said employment agreement is attached hereto as Exhibit 2A, and is incorporated herein by this reference.

II.

The plaintiff also released defendant of any liability or obligation for the use of any idea, discovery or invention because any and all ideas, discoveries and inventions made or conceived by plaintiff are the subject of an express agreement entered into by and between the parties on September 15, 1955, consisting of four written documents, i.e., said 1955 agreement (Exhibit 2 to the complaint), said employment agreement (Exhibit 2A hereto), a patent assignment and disclosure agreement, and a copyright agreement, whereby plaintiff specifically agreed that during the period beginning with the date of his employment by defendant, and ending on a date six months after the termination of his employment, any improvements, inventions or discoveries made and conceived by plaintiff became, and at all times remained the sole and exclusive property of the defendant, with it being deemed that nothing in said employment agreement and said patent assignment and disclosure agreement shall affect, modify or alter said 1955 license agreement (Exhibit 2 to the complaint), all as more specifically set forth in said agreements. A true and correct copy of said patent assignment and disclosure agreement, and a true and correct copy of said copyright agreement are attached hereto as Exhibits 2B and 2C, respectively, and are incorporated herein by this reference.

FOURTH AND SEPARATE DEFENSE

As a fourth and separate defense the defendant alleges the causes of action are void and unenforceable against defendant because defendant has shop rights relating to any and all alleged ideas, discoveries or inventions of plaintiff, if any, wherein defendant had a

non-exclusive right and license to manufacture, use, and sell any product embodying any such ideas, discoveries, improvements or inventions, in that

I.

All physical instruments fabricated by plaintiff either by himself or in cooperation with other employees, and whether independent of supervision or under the supervision of plaintiff, or otherwise, while plaintiff was in the employ of defendant and whether or not they contained ideas, discoveries of inventions of plaintiff, became the property of the defendant to manufacture, use and sell free from any and all royalty payments to plaintiff or others, in accordance with the express terms of the December 29, 1951 agreement (Exhibit 1 to the complaint) granting these rights to defendant insofar as that agreement was in force and had effect.

II.

Defendant, by agreement executed by plaintiff on September 15, 1955, received and retained at least a non-exclusive license as to any and all discoveries, improvements and inventions of plaintiff, if any, which may have been made or conceived by plaintiff during his employment by defendant, with it being deemed that nothing in said employment agreement and said patent assignment and disclosure agreement (Exhibits 2A and 2B hereto, respectively) shall affect, modify, or alter said 1955 license agreement (Exhibit 2 to the complaint), all as more specifically set forth in said patent assignment and disclosure agreement (Exhibit 2B hereto), and in said employment agreement (Exhibit 2A hereto).

III.

Any and all ideas, discoveries, disclosures, improvements or inventions, if any, which plaintiff may have conceived either before or during the period of plaintiff's employment with the defendant, and insofar as any of these alleged ideas, discoveries, disclosures, improvements or inventions, became embodied in any physical instrumentations, such embodiment was by and through the use of defendant's materials, facilities, appliances and aid of other of defendant's employees during plaintiff's employment for which he was adequately compensated in salary and other remuneration and expected and requested no other.

WHEREFORE, defendant prays that plaintiff take nothing by his complaint, that the same be dismissed as to this defendant and that defendant recover its costs and such other relief as may be just and proper.

Christie, Parker & Hale
C. Russell Hale, Esq.
Edwin L. Hartz, Esq.
Kenneth C. Newell, Esq.
By /s/ Edwin L. Hartz
Attorneys for Defendants

EXHIBIT 2A. (to the Second Amended Answer)

September 15, 1955

John S. Adkins
4628 21st Street
Santa Monica, Calif.

Dear Mr. Adkins:

You have been employed by us for some time prior to this date, pursuant to verbal arrangements between us. Effective September 15, 1955, your employment with us shall be continued on the following terms and provisions.

You are employed on a month-to-month basis as Gyro Instrument Department Head of the Santa Monica Branch of the Grand Rapids Instrument Products Division, in connection with our gyro projects. Your salary will be at the rate of $1,000 per month and you will report to Victor Welge. You will further be entitled to participate in our Incentive Bonus Plan in such manner as determined by our Incentive Bonus Committee, so long as said Plan is in effect.

Your employment is subject to our usual terms and conditions which include the signing by you of our customary form relating to assignment of patents, and such agreement relating to assignment of patents shall be deemed to relate to and include not only the period of employment after this date, but also the entire period of your employment prior to the date hereof. It is understood, however, that nothing herein contained or contained in said agreement relating to assignment of patents mentioned in the prior sentence, shall be deemed to affect, modify or alter the certain license agreement between you and us, executed simultaneously herewith,

under which you are granting to us a license to use certain of your inventions and claims as set forth in such license agreement. You also agree that we shall have the right to use your name and photograph in our catalogs, booklets, etc.

This agreement cancels and supersedes all agreements between us prior to this date relating to your employment. It is further specifically understood that the written agreement dated December 29, 1951 heretofore entered into between us, is cancelled and terminated as of this date, and that you hereby release us of and from any and all claims, demands and liabilities of every kind which you ever had or now have against us, by reason of any matter or thing from December 29, 1951 to the date hereof, including especially (but not by way of limitation) all claims and demands arising out of or in connection with your employment prior to this date, and all claims and demands arising out of or in connection with said written agreement of December 29, 1951.

LEAR, INCORPORATED
By /s/ Richard M. Mock
President

PEG:vlt

Accepted and Agreed To:
/s/ John S. Adkins

EXHIBIT 2B (to the Second Amended Answer)

AGREEMENT

In consideration of Lear, Incorporated, a corporation and/or its subsidiary and affiliated companies, (herein referred to jointly and severally as the "Corporation") retaining me on its payroll after the date of this agreement, I:

1. Agree to disclose promptly and fully to the Corporation, any and all discoveries, improvements and inventions made or conceived by me, individually or jointly with others during the period beginning with the date of my employment by the Corporation and ending on a date six months following the termination thereof; that shall relate to or be within the existing or contemplated scope of the business of the Corporation.

2. Agree to submit adequate written disclosures of all said discoveries, inventions, and improvements, dated and signed by me, including details of the circumstances and date of conception, the names of those having knowledge thereof, and accompanied by sketches, photographs, drawings and other data pertinent thereto.

3. Agree that all of said discoveries, inventions and improvements shall be and at all times remain the sole and exclusive property of the corporation.

4. Agree to assign to the Corporation on request all such discoveries, inventions and improvements, irrespective of whether patent applications are filed; and, if patent applications are filed, to make assignment thereof. In the event the Corporation declines to make application for patents on such discoveries, inventions or improvements or any of them, it will, upon request, release me from such assignment, retaining only a non-

exclusive license as to said inventions or discoveries or improvements.

5. Agree to make and execute upon the request of the Corporation and at its expense, applications for letters Patent of the United States and any foreign country, on any such discoveries, inventions and improvements, including divisional, continuing or reissue applications. To give, without added compensation, all reasonable assistance, information and authorization in the preparation of applications, drafting of amendments and other matters pertaining to the procurement and protection of Letters Patent.

6. Agree not to disclose at any time confidential information obtained by, or imparted to me, while in the employ of the Corporation, to anyone without the written consent of the Corporation. The word "third" shall not include employees and agents of the Corporation duly authorized to receive such information. I further agree, upon termination of my employment, not to take, without the Corporation's written consent, any records, drawings, data, prints or any other documents of any kind pertaining to matters of the Corporation.

7. Agree that whenever requested, without compensation therefor, except as otherwise herein provided, I will execute and deliver all additional instruments and papers, and perform all other acts which the Corporation may deem necessary and proper to effectuate this agreement, and the fulfillment of any obligations imposed hereby, including, but not by enumeration excluding the generality of the foregoing, testifying in interference proceedings, suits and other legal proceedings, in which any discovery, improvement or invention

made or conceived by me, or any applications or patents therefor may be involved.

8. Acknowledge that the Corporation hereby makes no specific offer of additional compensation for disclosures or assignments of inventions, improvements or discoveries, but I do recognize that inventive ability is one element of value to the Corporation and that the same is taken into consideration in fixing or adjusting my compensation, in accordance with its policy of recognizing services of whatever nature.

9. Agree that no change in this Agreement or in any of the provisions hereof shall be binding on the Corporation or have any force or effect unless and until made in writing and executed by myself and a duly authorized officer of the corporation.

10. Agree that this agreement shall inure to the benefit of the successors and assigns of the Corporation, and shall inure to the benefit of and be binding upon my heirs, executors and administrators.

11. Further agree that this agreement shall be construed according to the laws of the State of California.

Signed at Los Angeles, California this 15th day of September, 1955.

Signed: /s/ John S. Adkins
(Sign first name in full)

State of California, County of Los Angeles,

On this 15th day of Sept., 1955, before me personally came the above-named John S. Adkins, to me personally

known to be the individual who executed the foregoing agreement, who acknowledged to me that he executed the same of his own free will for the purposes therein set forth.

/s/ Valerie Logan
Notary Public
My Commission Expires June 2, 1957
(Notary's Seal)

EXHIBIT 2C (to the Second Amended Answer)

LEAR INCORPORATED
LEARCAL DIVISION
COPYRIGHT AGREEMENT

This agreement, signed this 15th day of Sept., 1955, is hereby entered into in connection with and as a part of the employment of John S. Adkins hereafter referred to as "Employee" by Lear, Incorporated, hereafter referred to as the "Corporation".

"The Employee agrees that all writings, art designs, prints, labels, works of art and copyrightable subject matter pertaining to the Corporation and any of its subsidiaries, or arising out of or from or in connection with the Employee's employment by the Corporations, which the Employee, either solely or jointly with others, makes, develops or conceives while employed by the Corporation shall be the sole property of the Corporation; and the Employee agrees to execute all assignments and other instruments necessary to vest in the assignments the full and complete ownership of copyrights in such subject matter and all beneficial incidents thereof, both common law and under the Copyright Statutes of the United States and all other countries."

/s/ John S. Adkins
Employees' Signature

Fifth and Separate Defense of Lear Incorporated.

Lodged in the Superior Court of the State of California, for the County of Los Angeles, on April 6, 1964 and leave to file granted April 8, 1964. C. T. 1652.

AS A FIFTH AND SEPARATE DEFENSE, DEFENDANT ALLEGES:

Any and all of plaintiff's causes of action for breach of express contract, or breach of implied-in-fact contract, or for unjust enrichment, if. any, are void and unenforceable because of failure of consideration, in that:

I.

The license agreement of September 15, 1955, set forth as Exhibit 2 to the complaint, and alleged therein and as plaintiff's Exhibit 8 at the trial herein, at all times after execution up to termination on April 8, 1959, provided that in the event the United States Patent Office refused to issue a patent on the substantial claims of plaintiff's patent application which was Exhibit B to said agreement and hereinafter called said application, that defendant shall have the right to forthwith terminate the respective license and thereafter all royalty payments should cease and that said agreement further provides that royalties would be payable only on products manufactured and sold by defendant which incorporated an invention of the plaintiff and that the invention of the plaintiff would be delineated by the United States Patent Office during the prosecution of

plaintiff's said patent application under which defendant had an exclusive license.

II.

On or about March 21, 1957, the United States Patent Office held that the claims in said application relating to a method of bearing alignment and bearing structure, could not be patented and cited certain patents, and in particular Grenat Patent No. 2,531,334, and other prior patents, that the said decision of the said Patent Office became final and plaintiff was, upon said decision, finally unsuccessful in obtaining a patent on said method of assembly or on any feature of defendant's manufactured products, and accordingly defendant has not made any further royalty payments under said license agreement with respect to any and all Michigan products or steel gyro products.

III.

Plaintiff failed to obtain a patent which would afford defendant protection and which would cover defendant's products according to his warranties and representations, all as more specifically set forth in said agreement, because the said patent disclosed no patentable invention over and/or in view of, the state of the art existing and prior to the time application for said Letters Patent was filed, as listed at pages 13 and 14 of defendant's separate pretrial statement which was made a part of the pretrial order, and as more

particularly illustrated by the following prior art and patents and publications:

Defendant's Exhibit	Patentee	Patent No.	Issue Date
A-27	Grenat	2,531,334	11/21/50
A-30	Tanner	1,701,283	2/ 5 /29
A-31	Schwan	2,704,693	3/22/55
A-34	Harding, et al	2,269,103	1/ 6 /42
A-36	Van Der Heem	2,236,596	4/ 1 /41
A-38	Carlson	2,352,469	6/27/44
A-40	Moody	2,530,533	11/21/50
A-41	Van Der Heem	2,677,065	4/27/54
A-44	Freed	2,001,383	5/14/35
A-45	Herr	2,633,544	3/31/53
A-51	Sperry	1,342,397	6/ 1 /20

IV.

The alleged inventions and improvements and all material and substantial parts of the same, described and claimed as new in said Letters Patent No. 2,919,586 and attempted to be patented thereby do not exhibit or embody any substantial variation or change from the state of the art at the time of the alleged design or discovery by plaintiff John S. Adkins, and does not involve or require invention, and involves instead mere mechanical skill which does not constitute patentable subject matter, and are not and never have been of any utility or value.

V.

The claims 9 through 16 of said patent relied on by plaintiff as purporting to define an invention and allegedly covering defendant's manufactured products lack novelty or unexpected cooperation and constitute instead a mere nonpatentable aggregation of elements.

VI.

In view of the knowledge and practice of the art at and prior to the date of filing the application for Letters Patent No. 2,919,586 in suit, it is required for any of the claims 9 through 16 to be valid that such claims of the said patent must be so narrowly construed as to be incapable of validly covering any of defendant's Michigan products.

VII.

Defendant has at no time or place made use of the alleged improvements claimed in said patent in suit, and has never practiced any method or made, used or sold any gyroscope products or gyroscope components or gyroscope systems covered by, or in infringement of, any patent or license rights of the plaintiff, or damaged the plaintiff in respect of said patent or said license, or profited by reason of anything contained in or covered by said patent or said license because every such gyroscope product, component, and system manufactured by defendant does not incorporate any invention or claims of plaintiff, but on the contrary are built wholly according to the teachings of the prior art and/or defendant's own patents and knowledge and/or public domain inventions represented by expired prior art patents and devices in public use and sold in the United States for more than one year prior to the date of filing of said application, and that everything necessary for such manufacturing was taught by such prior art and defendant's knowledge plus ordinary mechanical skill and are thus without the scope of the alleged invention, and therefore outside the terms of said license agreement and no royalties are or were payable thereon.

(e) Paragraph 11 gives Lear four options upon Adkins leaving Lear's employ, three of which require payment of minimum royalties and one earned royalty only. If Lear could terminate under 2(a) and pay no royalties at all this would constitute a fifth option which would result in an absurdity as obviously Lear would always exercise a 2(a) termination. In other words Lear's construction of 2(a) makes Paragraph 11 wholly useless.

(f) It is also arguable that once Adkins leaves Lear's employ 2(a) is superseded by Paragraph 11 which provides that "in such event this license agreement shall continue in full force and effect". This construction is strengthened where the fourth option of no minimum but only earned royalties is elected since the same result pertains under the proper construction of Paragraph 2(a) prior to Adkins leaving Lear's employ.

In addition to a construction of all five termination clauses in said agreement prohibiting an exercise of 2(a) without prior or concurrent cessation of manufacture the same result must be achieved under CC §1655 and §1656 whereunder provisions which are necessary to make an agreement reasonable and capable of being carried into effect are implied as a matter of law, as any interpretation which would allow Lear to terminate and continue to manufacture the same gyros royalty free would be the most unreasonable construction of this clause that is conceivable. Clearly Adkins was not giving and Lear could not reasonably understand that it was acquiring the right to unilaterally end all royalty payments at any time.

Reporter's Transcript of Testimony in the Superior Court.

Adkins' Direct Examination.

Rep. Tr. p. 316, lines 2-26.

Q (By Mr. Cohen) How many different configurations of bearing cups are shown on that blowup drawing where the bearing cup mates to its receiving element?

A There are three different configurations of bearing cups on that drawing.

Q Would you describe the configurations and indicate where they are, please?

A On the left we have a spherical bearing cup, and a conical bearing cup receiving surface on the structure.

On the right side we have a conical surface on the bearing cup, and we have a rounded edge on the bearing cup receiving element.

On the outer axis we have a rounded edge on the bearing cup here (indicating) and this was identical around here (indicating), a rounded edge.

Then you have a cone on the bearing cup receiving element in both the top and the bottom.

Q By inner axis and outer axis you are referring to the inner gimbal and the outer gimbal?

A Yes; the inner gimbal, the ones that mounted the inner gimbal bearings and the outer gimbal bearings respectively.

Q Were all of these configurations designed by you?

A Yes.

Rep. Tr. p. 347, lines 7-18.

Q BY MR. COHEN: Are the bearing cups that are depicted on that blow-up of the 2152 alignable bearing cups?

A Yes, they are.

Q Are they capable of being rocked or shifted in the alignment process?

A They are.

Q Is here a relatively loose fit between the bearing cup and the hole in the gimbal?

A Yes.

Q And this permits the rocking or shifting?

A It does.

Rep. Tr. p. 358, line 7, to p. 359, line 7.

Q (By Mr. Cohen) Are they capable of being rocked or shifted in the process of assembly?

A Yes, the hole in the gimbal is oversized. It is bigger than the cylindrical surface of the bearing cup which permits them to be rocked so they can be aligned with respect to each other during the installation of the operation.

Q Is the configuration of the bearing cup and receiving hole the same in the 2151, 2152 and 2153 gyros?

A It is the same.

Q How are the bearing cups installed in the 2151 gyro?

A They are held in aligned relationship with a jig or fixture while the cement is in place between the bearing cup and the bearing cup receiving hole and the fixture remains in place until the cement cures so that the bearing cups are very highly accurately aligned with respect to each other for installation.

Q Is that the same way they are installed on the 2152 gyro?

A The same.

Q And is that the same way they are installed on the 2153 gyro?

A Yes.

Q And is that the same way they are installed on the 2156 gyro?

A The same,

Rep. Tr. p. 370, lines 5-20.

THE COURT: Counsel, let me give you a hint. Ask him this question: Is it true that in structure, function, and installation these bearings are identical with those that you have heretofore described in 2152?

MR. COHEN: Bearing cups, your Honor.

THE COURT: Yes.

THE WITNESS: Yes; the bearing cups are.

THE COURT: The bearings and all associated parts.

THE WITNESS: They are similar. They are a little bit different in configuration but the principle is the same.

THE COURT: The structure, function, and installation is similar or identical?

THE WITNESS: That is correct.

THE COURT: All right. That is everything you could possibly want about this bearing.

Rep. Tr. p. 375, lines 12-21.

A These bearing cups are again held in aligned relationship and are cemented in place with a jig or fixture remaining in place while the cement is curing so that you end up with a structure in which they are permanently installed in aligned relationship.

Q (By Mr. Cohen) Are they alignable bearing cups?

VIII.

By the proceedings had or taken in the United States Patent Office in the prosecution of said patent application, attached as Exhibit "B" to said license agreement, the only possible claims which could ever possibly be construed so as to read on defendant's Michigan gyroscope products were claims for a method or process substantially different from any invention indicated, suggested or described in the original application therefor, which claims were repeatedly and finally rejected by the Patent Examiner in the above mentioned prosecution, and thus the plaintiff-licensor thereof and his legal representatives or assigns, are estopped from maintaining the issued claims are of such scope as to cover or embrace any Michigan products or apparatus which the defendants have made, used or sold, or which defendant is now making, using or selling.

Clerk's Transcript p. 1417, lines 6-14; Superior Court.

(i) does said agreement by construction either from within its four corners or by implying a provision into said agreement as a matter of law, prohibit termination without prior or concurrent cessation of manufacture and render the purported termination ineffective to terminate said agreement? or

Clerk's Transcript pp. 2319-2322 Superior Court.

adjudication in which the patent *is held* invalid.

Under Paragraph 6 Lear has the right to terminate said agreement or the license of the invention if the patent thereon is "held" invalid.

Similar clauses are always construed to mean third party adjudication only, *United States v. Harvey Steel*

Co. (1906) 196 U.S. 310. Thus Paragraph 6 of said agreement does not give Lear the right to question the validity of the patent issuing to Adkins. In addition, since Lear was in an industry where licensing of patents is commonplace it is presumed that Lear was aware of the rule prohibiting a licensee from questioning the validity of his licensors patent, *United States v. Harvey Steel Co.* (1905) 196 U.S. 310 and contracted with reference to it. In fact the evidence will show that Lear attempted to expressly reserve the right to question validity and then abandoned this point.

7. Lear cannot exercise 2(a) termination without prior or concurrent cessation of manufacture.

In Paragraph 2(a) Lear is given the right "on ninety days prior written notice to Adkins to terminate any one or more of the licenses herein granted". This paragraph, however, is silent on Lear's duty to pay royalties on products manufactured after notice of termination.

Paragraphs 2(a), 3(g), 6, 8 and 10 all pertain to various rights of termination and consequently must be read together in deciding whether Lear may validly exercise 2(a) termination while continuing to manufacture the very same gyros, *O'Connor v. West Sacramento Co.* (1932) 189 Cal. 7, 11. When the five paragraphs dealing with termination are considered together the conclusion is inescapable that *both* parties meant in Paragraph 2(a) that Lear may terminate under this paragraph only if prior thereto or concurrently therewith Lear ceases manufacture of all gyros incorporating said invention in which event Lear has 90 days to complete manufacture of gyros in progress. The obvious purpose of Paragraph 2(a) was to terminate minimum royalty payments if Lear decided to cease manufacture

of covered gyros in that even though Lear had no obligation to manufacture it would have to pay yearly minimum royalties even if it did not manufacture as long as the particular license was in effect. [Paragraph 3(g)]

(a) It is absurd to assume that Adkins was exchanging a right to a "mutually satisfactory royalty" for $500 upon execution of the said agreement [Page 2] which would be the only certain consideration if in conjunction with the right not to manufacture at all [Paragraph 3(g)] Lear also has the right to terminate and continue manufacture royalty free under Paragraph 2(a). Not only does the presumption against "absurd" results prevent such an interpretation but the cannon requiring all provisions dealing with the same subject to be construed together requires the result sought by Adkins.

(b) The *only* provisions enabling Lear to manufacture without "further royalt[y] payments" is expressly covered in Paragraph 6 in the event of adjudication of invalidity or non-issuance of "substantial claims"—both of which are acts which third parties only can occasion. There is not one indication in said agreement that Lear can by its own act terminate royalties under Paragraph 2(a) while continuing manufacture. As stated supra such a construction would violate the implied provision in every agreement of good faith and fair dealing *Automatic Vending Co. v. Wisdom* (1960) 182 Cal. App. 2d 354. In other words Lear's only rights to manufacture royalty free are covered in Paragraph 6 and such rights are not to be read into Paragraph 2(a). Paragraph 6 would be wholly

redundant if Lear for any reason could terminate under Paragraph 2(a) and escape payment of royalties.

(c) Under Paragraph 3(g) Adkins can terminate Lear's right to manufacture if Lear is in breach by failing to make minimum royalty payments and Lear thereafter has 90 days to complete manufacture of gyros then in progress and is expressly prohibited from further manufacture. It would be absurd to say that where Adkins can prevent further manufacture if Lear fails to pay minimum royalties, Lear can escape its obligation to pay minimum *and* earned royalties by terminating under 2(a) and thereby not only be relieved of a breach by failure to pay minimum royalties but also acquire the new right to manufacture free of any royalty at all. The 90 day grace period of 3(g) is solely for Lear's benefit and it must be assumed that the 90 day period of 2(a) is also solely for Lear's benefit since it can be of no benefit to Adkins in the absence of a duty to manufacture. Therefore an obligation to cease manufacture arises by necessary implication to give effect to the 90 day grace period and prevent it from being meaningless.

(d) Under Paragraph 10, Adkins can terminate if Lear fails to pay earned royalties and does not cure its default within the notice period. Like Paragraph 2(a) this paragraph is silent on Lear's right to manufacture after termination and it would also be absurd to say that Adkins can bar Lear from further manufacture only if it refuses to pay minimum royalties but not if Lear refuses to pay earned royalties. Consequently the duty to cease manufacture must be implied in both Paragraphs 2(a) and 10.

A Yes, they are capable of rocking or alignment in the oversized holes in the gimbal.

Q And this is because of the oversized holes in the gimbal?

A That's right.

Adkins' Cross Examination.

Rep. Tr. p. 550, line 16, to p. 552, line 22.

Q BY MR. HARTZ: Mr. Adkins, did you design and develop the 2152 gyro?

MR. COHEN: Your Honor, I object again to this as being irrelevant and immaterial. We are concerned only whether the gyro uses the patented construction that is covered in the agreement. We are not concerned with who designed the particular configurations used. I object on the ground that it is irrelevant and on the ground that it is immaterial.

THE COURT: Well, a patentee represents to the patent office and to the world that he is the inventor of something. I don't know why it would not be proper to ask him that.

MR. COHEN: That isn't what the question was, your Honor. The question called for whether he designed the particular configuration that is shown on that drawing and my objection is that that is irrelevant and immaterial.

THE COURT: May I have the question, please.

(The question was read by the reporter.)

THE COURT: I am assuming, perhaps, that the 2152 which has been mentioned here is within the class of structures referred to in this patent.

MR. COHEN: Yes, your Honor.

THE COURT: All right, the question is proper. The objection is overruled. Answer it.

THE WITNESS: No, I did not design that gyro.

Q BY MR. HARTZ: Mr. Adkins, did you design and develop the other steel gyros that have been listed here today, the 2151, 2153, 2171, 7000, 6001 and 7002 gyros, which we will collectively call the Michigan gyros?

Did you design and develop those, Mr. Adkins?

A No, I did not design those gyros.

Q Were these designed and developed in Michigan, Mr. Adkins?

THE COURT: What difference does it make? He didn't do it. What difference does it make who did it and where they did it?

MR. HARTZ: It is only for ease of reference so that I can term them "Michigan gyros," rather than reciting each time each and every one of these gyros.

THE WITNESS: If he doesn't know, how can you gain anything by asking him?

MR. HARTZ: I believe he does know, your Honor.

THE COURT: We are not going to waste time inquiring around. If you know, all you have to do is get a witness to say so. Let's move along.

MR. HARTZ: Yes, your Honor.

Q Mr. Adkins, did you design and develop this particular configuration of bearing cup that is employed in the 2152 gyro?

A No.

Q Did you design and develop the method of mounting, that is, did you design and develop the gimbal housing itself in the 2153 gyro?

A No, those detailed drawings were made in Grand Rapids.

Q Was the design and development also made in Grand Rapids?

A To the best of my knowledge, it was, yes.

Reading of Schoeppel Deposition.

Questions by Mr. Cohen. Answers by Mr. Schoeppel.

Rep. Tr. p. 614, line 25, to p. 616, line 10.

"Q Now, again, comparing the MA-1 compass depicted on Exhibit 1 and the steel gyro depicted on Exhibit 2, did the different shape of the bearing cups and the receiving holes make any difference in the method of construction of either of those gyroscopes?"

MR. HARTZ: Your Honor, I object to that question as calling for the opinion of a nonexpert.

THE COURT: I don't think you have to be an expert to answer whether a shell could fit into a big loose hole or not. Overruled.

(Continuing reading.)

"A This is a question that is rather broad. It is hard to answer in that context. Would you rephrase it.

"Q Was the procedure in constructing both gyros the same in spite of the difference in configuration of the bearing cups and their receiving elements?

"A Yes.

"Q Did the difference in configuration of the bearing cup and the receiving elements—

"A You are speaking now of the two axes that are comparable here? I want to make that distinction, that the 2 and 4 here on Exhibit 1—and we are talking of 1 and 3 on Exhibit 2. My answer to the question covers that precisely.

"Q We are speaking now of the gimbal as depicted on Exhibit 1 and Exhibit 2.

"A Right. So we are comparing like parts of like gyros.

"Q That is correct.

"A All right, good.

"Q Now, did the difference in configuration of the bearing cups and receiving elements on Exhibit 1 and Exhibit 2 make any difference in the operation of either of those two gyroscopes?

"A No."

Rep. Tr. p. 616, lines 17-19.

MR. COHEN: Your Honor, we will have to fold one of these drawings. He is comparing two drawings.

THE COURT: I appreciate that.

MR. LEE: This is Exhibit 1 and this is Exhibit 2.

Rep. Tr. p. 617, line 24, to p. 618, line 1.

THE COURT: Overruled. You can have wide differences in configurations and still perform the same function and get the same result. You concede that?

MR. HARTZ: Yes, your Honor, that is correct.

Schoeppel Deposition.

Questions by Mr. Cohen. Answers by Mr. Schoeppel.

Rep. Tr. p. 618, line 10, to p. 619, line 18.

"Q Now, are the differences in the shape of the bearing cups and the receiving elements as depicted on Exhibit 1 and Exhibit 2 differences in principle?

"A Would you clarify as to what you mean by 'principle.'

"Q Yes. Is there a difference in principle in the gyroscope that results from the difference in the configurations?

"A If the term 'principle' involves the alignment of the bearing cups with respect to the gimbal, I would

say there is no basic—in my opinion there is no basic difference in principle.

"Q Mr. Schoeppel, comparing the MA-1 compass as depicted on Exhibit 1 and the steel gyro as depicted on Exhibit 3, do they both have the same general arrangement of parts? Do they both have the same general arrangement of parts?

"THE WITNESS: May I suggest that the remarks in the transcript associated with Exhibits 1 and 2 also apply to Exhibits 1 and 3. The differences between 2 and 3 are incidental, in my opinion, to the discussion.

"Q Let me put this question to you, Mr. Schoeppel: Are the configurations of the bearing cups and the receiving elements as depicted and marked by you on Exhibit 2 and Exhibit 3 the same?

"A In every major respect they are the same.

"Q So that—

"A And they are very nearly identical.

"Q So that if I asked you the same series of questions comparing the MA-1 compass, as depicted on Exhibit 1, to the steel gyro, as depicted on Exhibit 3, as I did with respect to Exhibit 2, would your answers be the same?

"A Yes."

Carpenter Direct Examination.

Rep. Tr. p. 622, line 24, to p. 623, line 25.

Q (By Mr. Cohen) Mr. Carpenter, what is the configuration of the two bearing cups that are shown in the areas that are circled and marked Y?

A The configuration is a cylinder which has a step in it which makes it like a bushing with a flange on it.

Q And what is the configuration?

THE COURT: Some of the ladies look puzzled. You all know what a bushing is? They don't shake their heads "yes" and they don't shake their heads "no."

Now, you know women better than I do. It is up to you to make it clear.

A bushing is nothing more or less than a piece of pipe hollow on the inside or a cylinder would be another term for it. A little piece of pipe would be a bushing and that would be a description of what it is used for. It is a shape or configuration. Incidentally, don't be afraid of that word "configuration." That merely means its shape or appearance.

All right. Let's get back to where we were.

Q BY MR. COHEN: It is then a cylinder with a flange; is that correct?

A That is correct.

Q What is the configuration of the receiving holes that receive those bearing cups shown in Areas Y?

A They are round.

Q Cylindrical in shape?

A True.

Colloquy in Chambers.

Rep. Tr. p. 1019, line 19, to p. 1020, line 1.

MR. HARTZ: This gives Lear the right to determine what are substantial claims and having made this determination, it is something that will exclude competitors and give them a monopoly in this particular area of interest and this is something they did not get and could not get.

THE COURT: You say this is to be interpreted as meaning that Adkins gave Lear the exclusive right to determine what the claims in the patent were to be?

MR. HARTZ: The substantial claims, yes.

Rep. Tr. p. 1039, lines 25-26.

the only type of displacement that you can have is an angular displacement.

Carpenter's Cross Examination.

Rep. Tr. p. 1212, lines 2-13.

Q (By Mr. Cohen) Now, the clearance between the bearing cup and the hole is what permits the tipping of the rocking; isn't that so?

A That is what makes the movement, yes.

Q And the movement is tipping or rocking which is permitted?

A Well, it can be tipped. If it is located on top of the mandrel, the only tipping you are going to get is axial, back and forth, like a pendulum or you can move back and forth in a plane, in that direction. But talking about tipping or rocking, its locating in there, it would only be in the clearance hole.

Ferrill's Direct Examination.

Rep. Tr. p. 1286, lines 5-7.

I'm sorry, I said three method claims—three bearing claims, the first two were method claims and the other, the ninth claim, was an apparatus claim.

Ferrill's Cross Examination.

Rep. Tr. p. 1428, lines 6-25.

Q Now, the flat surface on the bearing cup and the smaller cylindrical surface considered together with the generally flat surface on the inside of the gimbal, in the hole of the gimbal or the wall of the hole of the gimbal, those surfaces fix the positions within limits that the bearing cup may take, do they not?

A No, they don't fix the positions. They do establish limits beyond which it cannot go.

Q Correct. They limit the positions which the bearing cup may take.

A They limit the radial freedom of movement and they limit the angular freedom of movement.

Q The rocking or tilting?

A The rocking or tilting as well as translation or radial movement.

Q Again, I believe we have said this, but the cup is a loose fit in the gimbal so that it can be rocked or tilted about; is that right?

A The bearing cup is smaller than the space in the gimbal and it is free to be rocked or tilted.

Curriston's Direct Examination.

Rep. Tr. p. 1733, line 27, to p. 1734, line 1.

Now, this then is the key to the whole gyro design: Its repeatability.

Curriston's Cross Examination.

Rep. Tr. p. 1783, lines 4-14.

Q (By Mr. Cohen) Now, of course, once the bearing cup is cemented in it is immaterial whether it has the tippy washer on it or not; isn't that so?

A Functionally, yes.

Q And the configuration of the cup makes no difference, either, once it is cemented in, does it?

MR. HARTZ: Your Honor, I object to that question as being beyond the scope of the direct.

THE COURT: The objection is overruled.

THE WITNESS: It doesn't make any difference once it is cemented in.

Reading of Schoeppel Deposition.

Rep. Tr. p. 2141, line 22, to p. 2142, line 6.

Questions by Mr. Cohen. Answers by Mr. Schoeppel.

A Um-hum. By that time Lear was firmly ensconced in the field of production of vertical gyroscopes for the Air Force in very sizable quantities, and we had competition of Bendix and Sperry on our heels, and it was essential that our organization obsolete our own product very quickly at that time, or we would have been obsoleted by the competition so that the purpose of the low-cost gyro on which I was working was two-fold. One was to reduce cost. The second was to build a higher-precision gyro that would be more difficult for the competition to attain.

Rep. Tr. p. 2172, lines 10-19.

Q Was the method of constructing the MA-1 compass, as depicted on Exhibit 1, and the steel gyro, as depicted on Exhibit 2, to hold the bearing cups in fixed relation to each other by a mandrel and then glue them into place in the bearing cup receiving element?

A It was the same in principle in both cases.

Q In both was the accuracy of the bearing alignment independent of the relationship of the mounting holes for the bearing cups?

A Yes.

Rep. Tr. p. 2173, line 15, to p. 2174, line 9.

Q Was the procedure in constructing both gryos the same in spite of the difference in configuration of the bearing cups and their receiving elements?

A Yes.

Q Did the difference in configuration of the bearing cups and the receiving elements—

A You are speaking now of the two axes that are comparable here? I want to make that distinction, that the 2 and 4 here on Exhibit 1—and we are speaking of 1 and 2 on Exhibit 2. My answer to the question covers that precisely.

Q We are speaking now of the gimbal as depicted on Exhibits 1 and Exhibit 2.

A Right. So we are comparing like parts of like gyros.

Q That is correct.

A All right, good.

Q Now, did the difference in configuration of the bearing cups and receiving elements on Exhibit 1 and Exhibit 2 make any difference in the operation of either of those two gyroscopes?

A No.

Rep. Tr. p. 2174, line 10, to p. 2177, line 11.

Questions by Mr. Cohen. Answers by Mr. Schoeppel.

"Q Did it make any difference in the cost of manufacture for either of those gyroscopes?"

There was an objection and I stated, "You may answer the question."

"A Part of the duties of a man in my position were to know the cost of this class of the detailed parts of gyros, as well as the cost of assembly and that sort of thing. This is known as value engineering today, in a new, dressed-up mode. The cost—

Q Let me stop you there for a minute, please. So that in the course of your employment by Lear between 1952 and 1957, when you went to Advanced Engineering, you became familiar with and necessarily became familiar with the cost of producing gyroscopes and parts for gyroscopes; is that correct?

A That is correct."

There was an objection and then the next question appears at page 54, line 20. That is just colloquy. At page 56, line 5.

(Continuing reading)

"Q Now, Mr. Schoeppel, in the course of your employment by Lear when you first went with Lear, from that time—

A May I ask this? There is an unanswered portion of my question. Do you wish to rephrase it or—

Q I will rephrase it eventually. I will lay the foundation first, if I may. Now, in the course of your employment with Lear from the time that you were first employed by Lear until the time that you went to Advanced Engineering, as a part of your duties did you become familiar with the costs involved in producing and developing gyroscopes and parts of gyroscopes?"

MR. HARTZ: I will object as being not relevant or material to any issue in the case.

THE COURT: We haven't delved into costs this far that I know of.

MR. COHEN: This is one way of showing that the configuration differs in the two gyroscopes is completely immaterial, to show that it makes no difference in the operation or function of the cost.

THE COURT: That would certainly be a roundabout way to prove it. The objection is sustained.

MR. COHEN: May I make an offer of proof, your Honor?

THE COURT: In chambers you may, yes.

MR. COHEN: Page 57, line 18:

"Q Now, are the differences in the shape of the bearing cups and the receiving elements as depicted on Exhibit 1 and Exhibit 2 differences in principle?

A Would you clarify as to what you mean by 'principle.'

Q Yes. Is there a difference in principle in the gyroscope that results from the difference in the configurations?

A If the term 'principle' involves the alignment of the bearing cups with respect to the gimbal, I would say there is no basic—in my opinion there is no basic difference in principle.

Q Mr. Schoeppel, comparing the MA-1 compass as depicted on Exhibit 1 and the steel gyro as depicted on Exhibit 3, do they both have the same general arrangement of parts? Do they both have the same general arrangement of parts?

A May I suggest that the remarks in the transcript associated with Exhibits 1 and 2 also apply to Exhibits 1 and 3. The differences between 2 and 3 are incidental, in my opinion, to the discussion.

Q Let's go through with the long form, anyway, so that we will have it for the record. Let's go off the record for a minute.

Let me put this question to you, Mr. Schoeppel: "Are the configurations of the bearing cups and the receiving elements as depicted and marked by you on Exhibit 2 and Exhibit 3 the same?

A In every major respect they are the same.

Q So that—

A And they are very nearly identical.

Q So that if I asked you the same series of questions comparing the MA-1 compass, as depicted on Exhibit 1, to the steel gyro, as depicted on Exhibits 3, as I did with respect to Exhibit 2, would your answers be the same?

A Yes.

Chesnut's Direct Examination.

Rep. Tr. p. 2271, line 23, to p. 2272, line 18.

A The supporting surface at the top on the gimbal frame, the blue member, is flat and mates with the laterally extending flange which is on the bearing receiving means. The two surfaces come together. In the lower bearing, the under face of the laterally extending flange on the bearing receiving member overlies the flat surface of the frame, so that the upper surface of the frame is the supporting surface for the green bearing receiving member, also some support provided by the vertical cylindrical portion of the lower bearing but not in the upper bearing.

Q (Mr. Lee): And is the relationship between the supporting surfaces and the mounting surfaces such as to permit the bearing receiving elements to be initially adjustably shifted into oriented position?

A Yes, for the same reason that I gave before. The hole through which the bearing receiving element is inserted is slightly larger than the hole in the frame and the bearing receiving element can be oriented, tipped, rocked, tilted.

Q And after the bearing receiving elements have been so oriented, are they in alignment with each other?

A Yes, sir.

Lee's Direct Examination.

Rep. Tr. p. 2377, line 6, to p. 2378, line 23.

The arrangement of the parts in this device is such that there is a small clearance, dimensionally speaking, a clearance between the cylindrical portion of the red

cup and the hole in the gimbal and this permits them, within the limitations of the amount of motion we are talking about here, and you must understand we are talking about rocking rotation through a very small angular amount, this so-called loose fit as has been testified to permits that cup to be tilted or rocked relative to the gimbal frame.

THE COURT: All right, Mr. Lee, will you continue.

JOHN M. LEE,

the witness on the stand at the time of the noon recess, having been previously duly sworn, resumed the stand and testified further as follows:

DIRECT EXAMINATION (CONTINUED)

THE WITNESS: Before lunch we were applying the claim language of Claim 9 of the Adkins patent to the 2152 gyro and we were talking about the section of the claim language which is labeled B prime on the chart and we had gone through and pointed out where the supporting surfaces were and the mounting surfaces, and to review briefly, the mounting surfaces are on the red cups and the supporting surfaces are on the facing portions of the green gimbal, at the bottom the mounting surfaces on the red cup face the portions of the yellow ring, which is in turn secured to the green gimbal.

I have pointed out that the clearance is such that a slight rocking or tilting of the cup is possible with reference to the frame.

Adkins' Direct Examination.

Rep. Tr. p. 2444, lines 5-12.

THE WITNESS: And the jet airplanes was one of our biggest problems because when we got the jet airplanes, the gyroscope instruments were a crisis at Wright Field for several years because they had errors as much as 18 degrees when they would make a race track turn, that was one of the biggest problems that we had, and because of the fact that this was a big problem, we had to develop specifications for gyro systems to meet this requirement.

Argument to Jury by Mr. Hartz.

Rep. Tr. p. 2946, line 14.

get the angular tilt, and according to Mr. Comstock's

Rep. Tr. p. 2975, lines 11-12.

You cannot have the type of movement that is taught and required by the Adkins patent;

Judgment on Verdict in Open Court

In the Superior Court of the State of California, in and for the County of Los Angeles.

John S. Adkins, Plaintiff, vs. Lear, Incorporated, Defendant. No. 737267.

Filed May 1, 1964.

This action came on regularly for trial on the 9th day of March, 1964, the plaintiff appearing by attorney Peter Cohen, and the defendant appearing by attorney Edwin Hartz.

A jury of 12 persons was regularly impaneled and sworn to try the action. Witnesses on the part of the plaintiff and the defendant were sworn and examined. After hearing the evidence, the arguments of counsel, and instructions of the Court, the jury retired to consider of their verdict, and subsequently returned into Court, and being called answered to their names and duly rendered their verdict in writing in words and figures as follows, to wit:

"TITLE OF COURT AND CAUSE" We, the jury in the above entitled action, PURSUANT TO THE COURT'S DIRECTION, FIND FOR THE PLAINTIFF ON THE #2156 GYRO IN THE SUM OF $16,351.93.

WE FURTHER FIND FOR THE PLAINTIFF AND AGAINST THE DEFENDANT FOR THE BALANCE OF HIS ACTION IN THE SUM OF $888,122.56

THIS 1ST DAY OF MAY, 1964.

Virgil R. Witt
Foreman

WHEREFORE, by virtue of the law, and by reason of the premises aforesaid, it is ordered, adjudged, and decreed that said PLAINTIFF JOHN S. ADKINS have and recover from said DEFENDANT LEAR, INCORPORATED THE SUM OF $904,474.49, with interest thereon at the rate of seven per cent per annum fom the date of the verdict until paid together with costs and disbursements amounting to the sum of $ ....

[Seal]

Rulings on Motions for Judgment Notwithstanding the Verdict and, in the Alternative, for a New Trial.

Superior Court of the State of California, for the County of Los Angeles.

John S. Adkins, Plaintiff, vs. Lear, Incorporated, Defendant. No. 737 267.

Filed July 2, 1964.

Before the Court are defendant Lear's motions for judgment notwithstanding the verdict and, in the alternative, for a new trial.

The Court directed a verdict for plaintiff for $16,351.93 as royalty under a license agreement for the use of plaintiff's bearing structure as described in patent No. 2-919-586. Defendant's liability for this amount rested upon its status as a licensee. Under the established rule it was estopped to deny the validity of its licensor's patent. Pursuant to the Court's direction, the jury returned the verdict. That portion of the verdict is not now disturbed.

But plaintiff claimed, in addition, that defendant's so-called "Michigan" device was subject to plaintiff's patent under the rule of equivalence. The jury so found and returned a verdict for royalties due in the sum of $888,122.56.

In this phase of the case, the rule of estoppel does not apply. Lear is free to assert that its own device is not covered by plaintiff's patent and, further, that plaintiff's patent is invalid. Otherwise, plaintiff would be in the position of being able to assert estoppel against every product of Lear which plaintiff deemed an equivalent.

Plaintiff twice conceded at the trial that he had no part in designing or inventing defendant's "Michigan" device. Both of the structures involved here were designed by employees of Lear. Each was developed independently: plaintiff's at the Santa Monica, California, plant; defendant's in Michigan. Each was developed within a few weeks of the other. There was no collaboration or joint activity. Plaintiff sought a patent on its device and after protracted prosecution and a personal presentation at Washington, D. C., was granted certain claims. He now asserts that defendant's "Michigan" device is covered by his patent as an equivalent, under claims 9, 13, 14 and 16.

Neither device was put on the public market. Defendant used a limited number of plaintiff's devices as covered by the directed verdict. The "Michigan's" device has been used with success in defendant's gyroscopes.

The issues now presented are:

(1) Is plaintiff's patent No. 2-919-586 valid?

(2) Assuming its validity, does it cover defendant's device under the rule of equivalents?

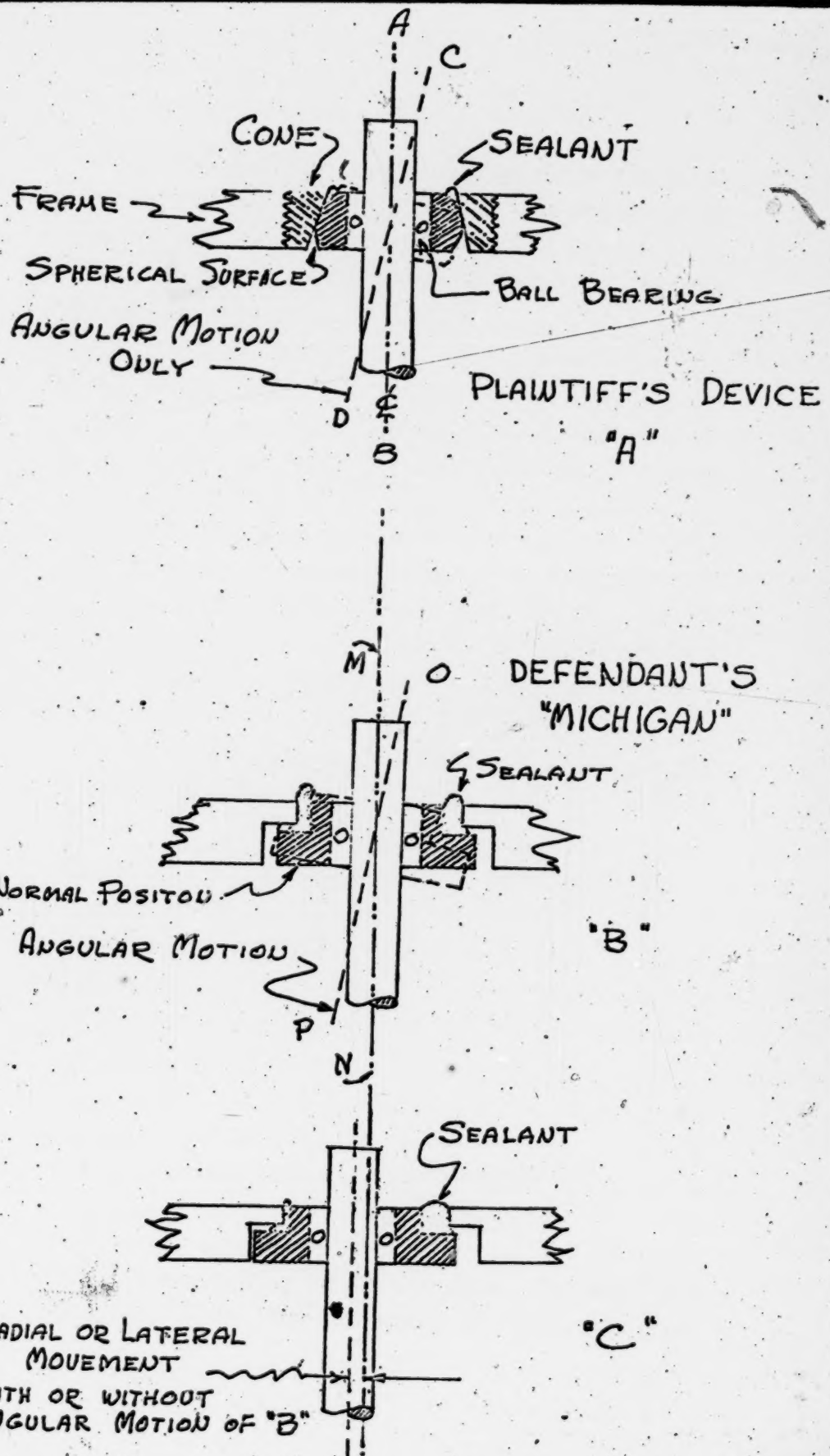
Plaintiff's patent is challenged frontally as a mere aggregation of features old in the art, as lacking invention, being within the skills of any craftsman in the field and long a device in the public domain.

Plaintiff's device is shown diagramatically in sketch "A"; defendant's in sketch "B".

The asserted novelty of plaintiff's invention is the coacting relationship of a pair of surfaces, such as a ball, or a section thereof, nesting in a cone, or a combination of surfaces comprising segments of two spheres. In such a device the inner element is capable of angular movement only.

Thus, in sketch "A", it is obvious that the only motion of the shaft A-B is the angular motion shown by a dotted line, such as C-D. No radial motion or adjustment is possible without separating the parts. To lift the ball upward in the cone so that sidewise or radial motion is possible would strip plaintiff's invention of its assigned functions and instead of practicing his invention, plaintiff would be ignoring it. To separate the parts in practice is to admit their inutility.

It is to be noted that in plaintiff's device contact between the inner part, such as a sphere, and the outer part, such as a cone, is limited to a single line of contact. This line of contact is circular if the shaft A-B coincides with the center line of the cone or funnel, otherwise it is an ellipse. There is no surface or area contact between the ball or inner element and plaintiff's cone, irrespective whether the latter is straight or spherical.


A
C
CONE
SEALANT
FRAME
SPHERICAL SURFACE
BALL BEARING
ANGULAR MOTION ONLY
D
B
PLAINTIFF'S DEVICE
"A"
M
O
DEFENDANT'S
"MICHIGAN"
SEALANT
NORMAL POSITOU
ANGULAR MOTION
"B"
P
N
SEALANT
RADIAL OR LATERAL
MOVEMENT
WITH OR WITHOUT
ANGULAR MOTION OF "B"
"C"

When the two bearings of plaintiff's device have been adjusted into place by means of a dummy shaft or mandrel, molten lead or plastic is applied in such manner as to prevent further movement between the cone and the sphere.

In defendant's device there is a cylindrical bearing holder with a flange for mounting in a slightly oversized hole in the frame. It may then be radially adjusted within the limits of the hole. Plastic or molten metal, such as lead, is then poured in the annular space between the bearing-holder and the frame. Angular adjustment may be made in this device as in Schwan's patent, which will be considered later. It may also be achieved simply by withdrawing the bearing-holder flange from the frame and tilting it as required. It is then sealed in place with plastic or molten metal.

The prior art cited in plaintiff's application included, inter alia, the following:

Sperry No. 1-342-397, which discloses a pair of bearings housed in sections of spheres for angular movement.

Carlson No. 2-352-469, wherein the shaft is angularly self-aligning by means of bearing-holders having outer spherical surfaces nesting freely within a cylindrical outer bearing-holder.

Grenat No. 2-531-334 shows a bearing sleeve tapered externally and internally formed to receive the shaft. The tapered sleeve fits into a hole in the frame and is adjustable angularly only. It is fixed in position by filling the annular space between the sleeve and the frame with a quick setting material such as Babbitt. The cone contacts the frame in a line only, and as in plain-

tiff's device this line forms a circle or an ellipse according to the position of the shaft. In simple form this device anticipates every feature of plaintiff's. Plaintiff evidently thought so, too, and purchased this patent.

Not cited by the Patent Office are the following significant patents:

Schwan No. 2-704-693 discloses a complete anticipation of the defendant's "Michigan" bearing. It shows a ball bearing, an element for holding said bearing—and an annular space between the bearing and the frame to provide for radial adjustment. All the claims are specific to radial adjustment of the bearing-holder.

It will be apparent at once that to the extent that either bearing in Schwan is moved radially in one direction and the other is moved less, or in any other direction, that an *angular* movement of the shaft has occurred at each bearing.

Moody No. 2-530-533 reveals a precise configuration of defendant's device—bearing sleeve—flanged bearing holder and housing. Add only a slightly oversized hole to permit adjustment and to secure the bearing and defendant's "Michigan" device is precisely and completely anticipated. Drilling an oversized hole and filling the annular space with plastic does not involve invention.

Herr No. 2-633-544 shows a conically tipped shaft rotating in a self-aligning hemispherical bearing, nesting in a cone in the same manner as plaintiff's. The bearings are free to adjust themselves to the axis of rotation precisely in the manner of plaintiff's.

No invention would be involved in substituting the sleeve or ball bearing for the conical bearing or solder-

ing in lieu of screw joints. This patent is a complete anticipation of plaintiff. It would be well within the skills of a mechanic to make plaintiff's device from the teachings of Herr alone.

In summary, defendant's "Michigan" device differs from plaintiff's in these particulars:

1. It may be adjusted radially after assembly. In contrast plaintiff's device has no radial motion whatever.

2. It may be adjusted angularly by tilting the shaft and bearings since contact between the bearing-holder and the supporting frame is not necessary.

3. Contact between the bearing-holder and the frame is a flat area of any desired size.

4. The bearing-holder is fixed in position directly to the frame. No intermediate member, such as plaintiff's cone, is required. This alone is a patentable distinction.

With the two devices now in focus, the prior art cited forces the question:

Was any patentable invention involved in plaintiff's patented device, or was it merely an aggregation of old parts and elements performing no new or different function?

This is purely a question of law. (*Bergman vs. Aluminum Lock,* Ninth Circuit, 1958—251 Fed. 2d 801; *Monroe Auto vs. Superior Industries, Inc.,* Ninth Circuit, May 22, 1964, U.S. Court of Appeals 141 U.S. Pat. Quarterly 710).

Neither device at bar represents or involves the inventive concept; neither has brought to light what lay hidden or created something which had not before existed. Neither device can be distinguished from the re-

sults of simple mechanical skill. A patent cannot be sustained when its effect is merely to subtract from former resources freely available to skilled artisans. (*Kwikset Locks v. Hilgren,* Ninth Circuit Appeals, 1954—210 Fed. 2d 483.)

The prior art, as disclosed by the patents cited above, dissipate any presumption of validity in the case at bar. "The existence of but one pertinent example of unconsidered prior art is not only sufficient basis to dissipate the presumption of validity, but may render the patent invalid". (*Monroe Auto vs. Superior,* supra.)

In *Great Atlantic & Pacific Tea Co., vs. Supermarket Equipment, etc.,* 340 US 147, the Supreme Court said: "The standard of patentability is a Constitutional standard; *and the question of validity of a patent is a question of law.* (Underscoring added). The Court fashioned in *Graver Tank & Mfg. Co. v. Linde Air Products Co.,* 336 US 271. . . . a rule for patent cases to the effect that this Court will not disturb a finding of invention made by two lower Courts, in absence of a further obvious and exceptional showing of error. That rule, imported from other fields, never had a place in patent law. Having served its purpose in *Graver Tank & Mfg. Co. vs. Linde Air Products Co.,* it is now in substance rejected. The Court now recognizes what has long been apparent in our cases; that it is the 'standard of invention' that controls. That is present in every case where the validity of a patent is in issue. It is that question which the Court must decide. No 'finding of fact' can be a substitute for it in any case. The question of invention goes back to the Constitutional standard in every case. We speak with final

authority on this Constitutional issue as we do on many others.

"Courts should scrutinize combination patent claims with a care proportioned to the difficulty and improbability of finding invention in an assembly of old elements.

"This patentee has added nothing to the total stock of knowledge, but has merely brought together segments of prior art and claims them in congregation as a monopoly."

In a concurring opinion Douglas and Black, JJ., pointed out that the Constitution does not sanction the patenting of gadgets.

Under the current rule in the federal courts, a holding of invalidity ordinarily renders moot any question of infringement or as more accurately stated in relation to the case at bar, a question of equivalence.

But it seems desirable, nevertheless, to dispose completely and separately of all issues raised.

Defendant's "Michigan" device represents even less an advance over the prior art than plaintiff's. The teachings of Schwan and Moody are so obvious that little further need be said to dispose of the matter.

It is sufficient to point out that a dunderhead, oversizing ever so little the bearing holes in Moody's patent, or using Schwan's bearing as it is, would come up with precisely the device manufactured by Lear.

Plaintiff also claims as an equivalent the so-called Tippy Washer used by defendant in some of its models. It is as well known in the crafts as an ordinary washer or nut or bolt. It is a flat, metal washer

with slight humps diametrically placed on the periphery. This permits small angular movements of a shoulder shaft. In defendant's application the washer was also shiftable in a radial direction. Clearly, neither plaintiff's claims nor his assertion of equivalency cover the Tippy Washer.

Since, as a matter of law, neither of defendant's devices could be the subject of a valid patent to anyone, it follows that plaintiff cannot claim them as equivalents under or as infringing his patent (even if valid).

The motion for judgment notwithstanding the verdict is granted in part, namely, the directed verdict for plaintiff for $16,351.93 shall stand, but the balance of the verdict for plaintiff and against defendant is set aside and a judgment in lieu thereof is entered against plaintiff and for defendant.

Dated July 2nd, 1964.

/s/ Brodie Ahlport
Judge of the Superior Court

Ruling on Motion for a New Trial.

Defendant moved for a new trial in the alternative to an order for a judgment for defendant notwithstanding the verdict, and assigned as grounds therefor:

1. Irregularity in the proceedings on the part of plaintiff by which defendant was prevented from having a fair trial.

2. Excessive damages appearing to have been given under the influence of passion or prejudice.

3. Insufficiency of the evidence to justify the verdict, or that it is against law.

4. Errors in law, occurring at the trial and excepted to by the defendant.

Defendant's foregoing motion is granted on and as to each and all of the grounds specified. Further, the Court finds specifically that the evidence was insufficient to justify the verdict and that the verdict is against law, and grants a new trial on each of said grounds.

Dated July 2nd, 1964.

/s/ Brodie Ahlport
Judge of the Superior Court

Part of and attached to Ruling on Motion for Judgment notwithstanding the verdict and for new trial in *Adkins vs. Lear,* No. 737 267.

Judgment for Defendant Notwithstanding the Verdict.

Entered, William G. Sharp, County Clerk, July 15, 1964. Book 5092, Page 018. G. C. Ericsson.

Filed July 10, 1964. William G. Sharp, County Clerk.

By D. Brownfield, Deputy.

Superior Court of the State of California, for the County of Los Angeles.

John S. Adkins, Plaintiff, v. Lear, Incorporated, etc., et al., Defendants. No. 737 267.

The motion of defendant Lear, Incorporated for a judgment for defendant notwithstanding the verdict having heretofore been submitted is granted in part for the reasons set forth in the "Ruling on Motions for Judgment Notwithstanding the Verdict and in the alternative for a new trial" and:

1. That part of the judgment for plaintiff John S. Adkins in the amount of $888,122.56 entered on the verdict on May 4, 1964 in Book 5033 at Page 47 is set aside and vacated and judgment for defendant Lear, Incorporated entered thereon notwithstanding the verdict.

2. That part of the judgment for plaintiff in the amount of $16,351.93 entered on the directed verdict on May 4, 1964 at said book and page is not affected hereby in any way or at all and shall stand as entered.

Dated: July 10, 1964.

/s/ Brodie Ahlport
Judge of the Superior Court

[Seal]

Amendment to Judgment.

Superior Court of the State of California, for the County of Los Angeles.

John S. Adkins, Plaintiff, vs. Lear, Incorporated, et al., Defendants. No. 737-267.

Filed Dec. 30, 1964.

The judgment in the above entitled action entered on May 4, 1964, in Judgment Book 5033 at Page 47, is hereby amended as follows:

> "At the outset of the trial, plaintiff John S. Adkins waived all ideas, discoveries and inventions under the second cause of action except for the idea, discovery and invention which is the subject matter of U.S. Patent No. 2,919,586. The Court then required plaintiff to elect between the first and second cause of action, and when plaintiff refused to do so, the Court then dismissed the second cause of action which, after the plaintiff's waiver, remained for the idea, discovery and invention which is the subject matter of U.S. Patent No. 2,919,586, and the same is hereby dismissed."

Dated: December 30, 1964.

Brodie Ahlport
Judge of the Superior Court

The Document to which this Certificate is attached is a full, true and correct copy of the original on file and of record in my office.

Attest February 16, 1965. WILLIAM G. SHARP County Clerk and Clerk of the Superior Court of the State of California, in and for the County of Los Angeles.

By R. K. Pachy
Deputy

(Title Omitted in Printing)

Pages 39-64 of Lear's "Opening Brief for Lear Concerning the Directed Verdict and the Denial of Lear's Motion for Judgment Notwithstanding the Verdict, All With Respect to the 2156 Gyroscope."

II. [39]

The License Agreement Was Terminated on April 8, 1959, and Was of No Force or Effect After That Date.

On April 8, 1959, defendant notified plaintiff by registered mail (which was received by plaintiff) as follows:

> "Reference is made to License Agreement between you and Lear, Incorporated dated the 15th day of September, 1955.
>
> "Pursuant to its rights of termination as contained in said agreement, including but not limited to Paragraphs 2(a) and 6 thereof, Lear, Incorporated hereby exercises its rights and options to terminate the agreement and licenses therein granted" [Ex. 39].

Paragraphs 2(a) and 6 of the license agreement [Ex. 8] state in pertinent part as follows:

> "2. GRANT.
>
> (a) . . . Lear shall have the right on ninety days' prior written notice to Adkins, to terminate any one or more of the licenses herein granted."
>
> "6. INVALID PATENTS.
>
> "In the event . . . the U. S. Patent Office refuses to issue a patent on the substantial claims of the application attached as Exhibit 'B' [this is plaintiff's application Serial No. 410,237 which became Patent No. 2,919,586] or if such a patent so issued is subsequently held invalid, . . . then in any of such events Lear at its option shall have the right forthwith to terminate the specific license so affected or to terminate this entire Agree-

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ment and no further royalties shall thereupon be payable under the license so terminated or under this Agreement if Lear shall have elected to terminate this Agreement in its entirety."

In accordance with the provisions of paragraph 9 of the license agreement [Ex. 8] defendant had the right to monitor the proceedings concerning plaintiff's patent application.

By April, 1959, plaintiff's patent application had been pending for more than five years, and no claims directed to bearing mountings had been allowed. These claims had been repeatedly rejected by the Patent Office as being unpatentable, and plaintiff had not obtained allowance of any substantial claims or any claims that could possibly provide patent protection for defendant's products.

On April 8, 1959, defendant exercised its rights to terminate the agreement because the agreement provided no benefit to defendant in return for the more than $30,000 in royalties it had paid plaintiff.

Some unidentified person in the law firm representing plaintiff interviewed the Examiner and without setting forth the reasons for getting the Examiner to reverse his position, obtained an agreement from the Examiner that some newly drafted claims 29-36 would be allowable. These claims were filed in the Patent Office on April 30, 1959 [Ex. P—p. 68], approximately three weeks after the license agreement was terminated. They were allowed by the Patent Office on July 21, 1959 [Ex. P—p. 70], three and one-half months after the agreement was terminated, and the patent issued about nine months after the agreement was terminated. During this period of time, defend-

[41]

ant's former Patent Agent, Perry Turner, was representing plaintiff and actually signed his name or caused his initials to appear on papers filed in the application during the part of this period after he became admitted to the California Bar on June 10, 1959 [Ex. P—pp. 71, 73, 83, 84]. Mr. Turner worked under the supervision of Mr. Patton who signed the other papers filed in the application [p. 1881, Ex. P]. He asserted the attorney-client privilege with respect to the full extent of his participation [Clk. Tr. pp. 422-427].

Thus, defendant terminated the license agreement before any pertinent claims were allowed, while Mr. Turner was seeking allowance of the application on behalf of plaintiff, and before the patent issued on January 5, 1960.

The trial court ruled on numerous occasions that the license agreement was terminated on April 8, 1959, as a matter of law.

At the beginning of the trial the court stated to the jury:

> "There was a clause in this agreement permitting defendant to withdraw or terminate under it, which they did . . ." [p. 239].

During some of the proceedings in chambers, the following colloquy took place:

> "Mr. Hartz: Yes; under the terms of the agreement, under Paragraph 2 (a) which provides that Lear on 90 days written notice may terminate this agreement, under Paragraph 6 which states that in the event the U. S. Patent Office refuses to issue a patent on substantial claims, Lear has the option to forthwith terminate this agreement.

[42]

The Court: There is no question about the right to terminate.

Mr. Hartz: All right.

The Court: Now, I am talking about the Lear device, the Michigan device.

Mr. Hartz: Yes.

Mr. Cohen: I assume I am going to get the right to be heard at length on this.

The Court: After the notice of termination do you feel that you thereby acquired the right to use the Adkins device without burden or liability of any kind?

Mr. Hartz: Only subject to his patent rights, yes, your Honor, that is correct.

The Court: In other words, you feel that Adkins is remitted solely to an action for infringement.

Mr. Hartz: That is correct. That has been our position from the beginning.

Mr. Cohen: That is directly contrary to the holding in Seagren v. Smith and 63 Cal. App. 2d, which covered this exact point and is the only case in California that covers this point. So they are arguing in the face of authority from the District Court of Appeal." [pp. 2583-2584].

Toward the end of the trial the court stated during the proceedings in Chambers:

"Mr. Hartz: Yes, your Honor, but we submit that we, having terminated the license, can challenge the validity and we submit that the Stimson Computing Scale Company case, and these two sections in Walker on Patents, which is Section 385 and Section 391 make this the rule that you can contest the validity after termination.

[43]

Mr. Cohen: Your Honor has already ruled that Seagren v. Smith is applicable as to that and they have not effectively terminated the agreement under Seagren v. Smith, which is the holding of that case.

The Court: No, I hold that they have terminated the agreement, but they are liable for any royalties that may have been incurred before or after if they continue to use the device that was under the protection of the Adkins patent." [p. 2627].

Plaintiff endeavored to straddle the issue of termination, and he submitted alternative jury instructions to the effect that the agreement was not terminated and to the effect that the agreement was terminated. By way of example, plaintiff's requested instruction No. 47 states in part:

"You are instructed that because Lear continued to manufacture 2152, 2153 and 2156 gyros which are covered products after April 8, 1959 that Lear's attempt to exercise the termination right under Paragraph 2(a) was wholly ineffective to terminate the license of the bearing alignment invention for the reason that Lear could only exercise 2(a) termination if at the same time or before exercise thereof Lear stopped manufacture of gyros incorporating the bearing alignment invention." [p. 3400, lines 14-23].

This instruction, along with several others to the same general effect, was refused.

Toward the end of the trial plaintiff took the position that the agreement was terminated as a matter of law, but that Lear was liable under the unjust en-

[44]

richment doctrine of *Seagren v. Smith* (1944), 63 Cal. App. 2d 733. Plaintiff even obtained a jury instruction to that effect which states:

> "PLAINTIFF'S REQUESTED JURY INSTRUCTION NO. 49
>
> "Even though the license of the bearing alignment invention was terminated by Lear's letter of April 8, 1959 and of no further force or effect, Lear is nevertheless liable to Adkins for royalties if you find that any products covered by Adkins' patent were thereafter manufactured and sold by Lear." [p. 3080].

This portion of plaintiff's requested instruction No 49 was given without modification by the court. Plaintiff cited *Seagren v. Smith,* as authority for this portion of the instruction. A second paragraph of the requested instruction No. 49 was stricken [p. 2772].

The following colloquy took place in chambers with respect to jury instructions concerning the issue of termination:

> "The Court: I was under the impression that your stipulated statement of facts support the instruction that of April 8, 1955 [sic] the agreement was terminated.
>
> Mr. Hartz: It was stipulated the letter was sent and received and it is our position that this is sufficient for the termination. This is all that was required. All the conditions were met and as a matter of law the termination was effective.
>
> The Court: I don't know what question of fact remains.
>
> Mr. Cohen: That is the point, your Honor. I think it should be removed from the jury as not a

[45]

question of fact for them since your Honor has instructed them on it as a question of law.

The Court: Oh, you are not objecting to the recital of the matter as a question of law?

Mr. Cohen: Not in that form.

The Court: I gave it to the jury because it seemed to me that for them to get the whole picture it was necessary for them to have the facts of termination before them. If there is any question in anybody's mind as to what the jury could reasonably feel about it, why, I will make it very clear to them.

Mr. Cohen: Your Honor stated, the effect was that the letter did effect the termination, but that as a matter of law they were still liable for the agreed royalty rate if they continued to manufacture the product. Now, this, as I say, and I think that Mr. Hartz agrees, is a matter of law. Your Honor has correctly instructed them on this matter of law, as you determined the matter of law to exist, and it should not go to them under the instruction that they can find as a matter of fact that the agreement is terminated in conflict with your Honor's instructions on that subject.

The Court: I am afraid I don't follow you.

Mr. Cohen: *What I am saying is that your Honor instructed them that the agreement was terminated by the leter of April 8, 1959.*

The Court: *Yes.*

Mr. Cohen: *But that thereafter Lear would continue to be liable for royalties at the agreed royalty rate if they continued to manufacture the products that are covered by the patent.*

[46]

The Court: *You agree with that, do you not?*

Mr. Cohen: *Yes, your Honor.*

Mr. Hartz: We do not, your Honor.

Mr. Cohen: That is the Seagren v. Smith case, which is a correct proposition of law. However, the jury must find in accordance with that instruction of law, and does not have the right to find it as a question of fact that the agreement was terminated and that therefore no further royalties are due." [pp. 3042-3043]. (Emphasis ours.)

Thus, plaintiff and defendant and the trial court all agreed that the license agreement [Ex. 8] was terminated as a matter of law. Plaintiff and the trial court were of the opinion that any liability would be based upon the unjust enrichment doctrine as set forth in *Seagren v. Smith* (1944), 63 Cal. App. 2d 733. Defendant did not agree that *Seagren v. Smith* applies, and this issue will be discussed in section IV of this brief.

It is submitted further that the directed verdict is in error because the license agreement was terminated, and the law is clear that the doctrine of license estoppel does not continue after termination of the agreement. The case of *Seagren v. Smith, supra,* is not in conflict with this principle because the issues of validity and infringement of a patent issued after the termination of a license agreement were not raised or decided in that case.

It is also submitted that the directed verdict is in error concerning the infringement issue because the doctrine of licensee estoppel has never applied to infringement or the questions of coverage.

The directed verdict is also in error because there is a complete failure of consideration to support any obli-

[47]

gation imposed by law, such as under the unjust enrichment doctrine of *Seagren v. Smith.*

When a license includes a termination provision which is exercised by either party, any estoppel to contest validity of the licensed patent does not continue beyond the date of termination. The reason for the rule is that after termination the licensor-licensee status is at an end and the parties stand in the same position and with the same rights that strangers have.

Davis v. Buck-Jackson Corporation (4th Cir. 1956), 230 F. 2d 655;

Miehle Printing Pr[illegible] & Mfg. Co. v. Publication Corporation (7th Cir. 1948), 166 F. 2d 615;

Measurements Corp. v. Ferris Instruments Corp. (3rd Cir. 1947), 159 F. 2d 590;

Tate v. Baltimore & O. R. Co. (4th Cir. 1915), 229 Fed. 141;

Stimpson Computing Scale v. W. F. Stimpson (6th Cir. 1900), 104 Fed. 893;

Walker on Patents (Deller's Ed.), 1937, pp. 1496 and 1505.

The basic rules of licensee estoppel are summarized in 69 *Corpus Juris Secundum,* §160.a(1), page 621 wherein it is stated:

> "In general a licensee, during the continuance of the license, is estopped to deny the validity of the patent on any ground."

See also 69 C.J.S. §160.a(3), page 624.

And in 69 C.J.S., §254c, page 784, wherein it is stated:

> "As a general rule the lawful cancellation of a patent license relegates the parties to their status prior to the granting of the license. . . .

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> Except as the agreement may otherwise provide, on proper termination of the license, the rights and liabilities of the licensee thereunder are likewise brought to an end . . . he (the licensee) is no longer estopped to deny the validity of the patent . . ."

In *Miehle Printing Press & Mfg. Co. v. Publication Corporation, supra,* the court held that licensee estoppel does not survive termination of the license agreement, stating, at page 618:

> "We recognize, of course, the rule by which a patent licensee may be estopped during the term of the license to dispute the validity of the patent, but we are of the view that it has no application where the licensee effects a valid cancellation of the license agreement, as was done here."

The case of *Stimpson Computing Scale Co. v. W. F. Stimpson, supra,* involved a very similar factual situation to that of the present case. In the *Stimpson* case the licensor had a patent application pending in the Patent Office and the patent issued at a later date. The license agreement provided that the licensee shall have the right to determine the agreement and its obligations thereunder by giving six months' notice in writing to the licensor. The court held that the licensee could terminate the agreement by giving the prescribed notice and stated at page 897:

> ". . . That being out of the case, we can find no ground on which to restrain the manufacture and sale by the appellants of the articles mentioned. It may expose the appellant to a suit for infringement, but that, as we have said, is foreign to the purpose of the present suit. Aside from the patent,

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there is nothing to prevent the appellant from selling the same kind of goods as it sold during the term of the contract."

The case of *The Armstrong Company v. Shell Company of California* (1929), 98 Cal. App. 769 is to the same effect. The majority decided the *Armstrong* case on another and separate issue. However, this does not detract from the fact that the above rules of law are recognized in California. As stated in the *Armstrong* case at page 778:

"Appellant next contends that the trial court erred in overruling plaintiff's motion to strike out all testimony, exhibits and proofs offered for the purpose of showing that plaintiff's patent was invalid. It is a well-recognized rule of law that a licensee under a patent right cannot dispute the validity of his licensor's patent. But an apparent exception to the rule of estoppel exists where the licensee repudiates the license."

The exception is even more applicable where the license agreement is terminated in accordance with termination provisions therein, as in the present case, because the former licensee thereafter neither receives nor enjoys any benefit or protection under the patent or patent applications covered by the agreement. The analysis in the *Armstrong* case continues on page 779:

". . . A licensee is estopped to show the invalidity of licensed patents as a defense to an action for royalties only so long as the relation of licensor and licensee continues and the licensee uses and enjoys the benefit and protection of the patents covered by the agreement. . . . A licensee, if the pat-

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ents are in fact invalid, may, without waiting to be evicted, denounce and abandon the license, and after giving notice thereof to the licensor, may defend against an action to enforce the license or to recover royalties subsequently accruing, with the same freedom as may a stranger to the patent, and the licensor is remitted to his infringement suit."

It is noted in the *Armstrong* case that the situation is more favorable to the former licensee when the agreement is terminated rather than repudiated. This recognition that a termination provision always allows the former licensee to contest the validity after termination and an analysis of the reason for licensee estoppel is set forth in the *Armstrong* case, beginning on page 779:

". . . The contention is made, and some support therefor may be found in the books, that a licensee cannot, *in the absence of a provision permitting the license to be terminated,* contest the validity of patents covered by the agreement, even after renunciation and notice. This contention originates in the commonlaw doctrine of estoppel by covenant. It requires to support it, first, a special admission, of fact, namely, that the patent is valid, or that the licensor is the first and true inventor of the invention covered by the patent; and second, a deed or covenant under seal which, at common law, barred a party thereto from disputing the truth of an admitted fact. It is doubtful if this rule ever had any application in equity, which from early days, gave relief against deed or agreements under seal in certain situations; but, be that as it may, the true rule, in my opinion, now is that the licensee, whenever he ascertains that the patents covered by the license

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agreement are invalid, may refuse to be further bound thereby, and, upon repudiation and notice, may thereafter defend against an action for royalties or an infringement suit as freely as may a stranger. This is particularly true in a case like the present, where the license agreement contains no recital or clause admitting the validity of the patents and no stipulation not to dispute or contest the validity thereof. If the patents are in fact invalid, then there is no continuing consideration for the agreement, and as was said by Mr. Justice Brown in *Pope Mfg. Co. v. Gormully,* 144 U.S. 234 [36 L. Ed. 414, 12 Sup. Ct. Rep. 636, see, also, Rose's U.S. Notes]: 'It is as important to the public that competition should not be repressed by worthless patents, as that the patentee of a really valuable invention should be protected in his monopoly.'"
(Emphasis added.)

The limits of the licensee estoppel doctrine were recognized as early as 1886 in the case of *Brown v. Lapham* (S.D. N.Y., 1886), 27 Fed. 77. In the *Brown* case the defendants were prior licensees of plaintiff who had brought suit against them in equity and who had moved for a preliminary injunction. The court answered plaintiff's motion in the following manner as set forth at page 77:

". . . The plaintiff relies upon the estoppel of the defendants to deny the validity of the patent growing out of the license and the operating under it by them. There is no fair question but that a licensee under a patent is estopped to deny its validity of any question arising out of that relation between the parties. *Kinsman v. Parkhurst,* 18 How. 289.

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It does not follow that he will be always estopped because he has stood in that relation. When he stands out from under the license, and claims nothing from it, and does nothing more under it, with full knowledge to the licensor of his position, he would appear to be at as full liberty to contest the patent as anyone . . ."

Additional authorities to the same effect are:

H. Tibbe & Son Manufacturing Co. v. Heineken (Circuit Court S.D. N.Y. 1889), 37 Fed. 686;

DeCrew v. Union Bag & Paper Corp. (N.J. 1944), 57 F. Supp. 388;

Howe v. Atwood (E.D. Mich. 1942), 47 F. Supp. 979;

Frost Ry. Supply Co. v. T. H. Symington & Son (Md. 1938), 24 F. Supp. 20;

Chance v. Lehigh Navigation Coal Company (E. Pa. 1938), 25 F. Supp. 532;

Eskimo Pie Corporation v. National Ice Cream Co. (W.D. Ky. 1927); 20 F. 2d 1003;

Bituminous Products Co. v. Headley Good Roads Co. (D. Del. 1924), 2 F. 2d 83.

With respect to infringement, even an existing licensee or assignee to which the doctrine of licensee estoppel applies, is not liable for royalties under a license contract when the patent claims construed in light of the specification, patent history, and prior art do not cover defendant's manufactured products.

Westinghouse Electric & Mfg. Co. v. Formica Insulation Co. (1924), 266 U.S. 342;

[53]

Baldwin Rubber Co. v. Paine & Williams Co. (6th Cir. 1939), 107 F. 2d 350;

Farmland Irrigation Co. v. Dopplmaier (1957), 48 Cal. 2d 208;

Garland v. Remington Arms Company (S.D. N.Y. 1956), 137 F. Supp. 622.

It is also settled California law that mere nonpayment of royalties allegedly due under a licensed application is not a breach, and does not constitute a basis for awarding royalties when the claims of the patent which issues do not cover the manufactured products or the invention as originally represented and warranted by the licensor. *Marvin v. Mills Alloys, Inc.* (1939), 31 Cal. App. 2d 549.

Furthermore, a licensee who is estopped to contest validity, is not liable for royalties under a license contract even if the claims of a subsequently issued patent literally read on manufactured products, when it is shown that such products are built wholly according to the prior art teachings plus ordinary mechanical skill. *Scott Paper Co. v. Marcalus Mfg. Co.* (1945), 326 U.S. 249; *Casco Products Corp. v. Sinko Tool & Mfg. Co.* (7th Cir. 1940), 116 F. 2d 119, cert. denied (1941), 312 U.S. 693.

Plaintiff has relied upon the cases of *Automatic Radio Mfg. Co. v. Hazeltine Research* (1950), 339 U.S. 827; *Bowers Mfg. Co. v. All Steel Equipment, Inc.* (9th Cir. 1960), 275 F. 2d 809; and *Del Riccio v. Photochart* (1954), 124 Cal. App. 2d 301 [Clk. Tr. p. 2326] in support of his assertion that defendant cannot contest either the validity or infringement of plaintiff's patent. These cases are not in point.

[54]

The *Automatic Radio* case merely restated the rule of licensee estoppel where the license was still in effect and there had been no termination or end to the agreement.

The Ninth Circuit case of *Bowers* and the California case of *Del Riccio* do not in any way negate the rule of law that after termination of the license agreement there is no estoppel.

The *Bowers* case was an action to require specific performance of a non-exclusive license concerning a patent which had already issued. The license was entered into to avoid an infringement suit by the patent owner after exchange of correspondence concerning infringement of the patent. The license agreement had certain cancellation provisions, but the license did not terminate the license in accordance with these provisions of the agreement. Instead, the licensee attempted to repudiate the agreement on the basis of failure of consideration. The court pointed out that the consideration for the non-exclusive license was essentially a shield from suit for infringement by the grantor, and hence the invalidity of the patent would not constitute failure of consideration for such a license and, thus, would not support a repudiation. The court went on to point out, however, that where the consideration is the monopoly value of the patent, invalidity of the patent would constitute failure of consideration for such a license.

The patentee in the *Bowers* case summarized the question before the court as follows:

> "The execution of the license agreement is admitted by BOWERS, as are all of the facts leading up to the execution of the license agreement.

[55]

BOWERS contends that as a non-exclusive licensee it has the right at any time to repudiate, abandon, and terminate the license agreement by its unilateral action, notwithstanding the fact that the license agreement in paragraph III (R-38) specifically provides that BOWERS shall have the right to cancel the agreement only in the event (a) that the Keierleber patent is held invalid by a court of competent jurisdiction; and (b) if BOWERS completely discontinues the manufacture and sale of products covered by the Keierleber patent. Except for these two specific grounds for termination, neither of which has occurred, the license, as provided in paragraph I (R 37), was to extend for the full term of the patent, which term ends in July of 1964.

"The single question on this appeal is one of law and may be simply stated as follows: May a nonexclusive licensee by a unilateral notice of termination effectively terminate a license agreement contrary to the terms thereof?" [Clk. Tr. p. 1808].

The *Bowers* case merely held that a non-exclusive license entered into as "a shield from suit for infringement by the grantor" [275 F. 2d 809, 811] cannot be repudiated or terminated contrary to the provisions of the license agreement. Thus, the court held that the repudiation or purported termination did not terminate the license agreement, and the court ordered specific performance of the agreement. In the present action both plaintiff and the court have agreed that the license agreement was terminated as a matter of law in accordance with the provisions of the agreement. Hence, the *Bowers* case does not apply at all.

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Moreover, the *Bowers* case involved a non-exclusive license concerning an issued patent having known claims at the date of the license agreement. The licensee even admitted infringement. The licensee stated:

> "There is no question in our mind that one of our clamps is fully covered by your patent . . ." [Clk. Tr. p. 1801].

In the present case the license was exclusive with a provision that it could become non-exclusive upon certain conditions subsequent, and it was based upon claims in a patent application which were never obtained. The claims that were ultimately obtained do not cover defendant's products and they are invalid. The defendant had the right to participate in the enforcement of any patent which issued against defendant's competitors [Clk. Tr. p. 22]. The competitive value of the patent was the consideration in the present action and it failed to materialize, whereas a mere "shield from suit for infringement" was the consideration in the *Bowers* case. There was a failure of consideration in the present action, but not in *Bowers*.

The *Del Riccio* case, *supra*, is to the same effect as the *Bowers* case. In the *Del Riccio* case a license agreement concerning an issued patent was entered into in order to compromise existing litigation between the parties. The court held that the non-exclusive licensee could not contest the licensed patent because the consideration for the agreement was primarily the compromise of previously existing litigation between the parties concerning the patent. Thus, the primary consideration was not an enforceable patent monopoly to be established by the allowance of substantial claims in a valid patent, as it was in the present case.

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In the present action everyone is in agreement that the license agreement was terminated and of no further force or effect after April 8, 1959. Thus, the doctrine of licensee estoppel simply does not apply.

Plaintiff has no protectible property rights after the agreement was terminated other than the rights conferred by the United States Patent Laws. Defendant has no duty to plaintiff after the agreement was terminated. Hence, there is no basis for any obligation subsequent to April 8, 1959, as more fully discussed in the next sections of this brief.

III.

No Protectible Property Rights Exist for Plaintiff Subsequent to Termination of the License Agreement Other Than His Rights Under the United States Patent Laws.

At the beginning of the trial in the introductory statements to the jury, the court characterized this action as follows:

> "There was a clause in this agreement permitting the defendant to withdraw or terminate under it, which they did; subsequently the plaintiff's employment itself was terminated.
>
> "This is an action in which the plaintiff is claiming that certain devices made by Lear came within the call of this patent and that he is entitled to the royalties at an agreed rate which I think was 1¼, wasn't it?" [p. 239].

At the end of the trial the trial court in the jury instructions characterized the action in the same way, as follows:

> "PLAINTIFF'S REQUESTED JURY INSTRUCTION NO. 49

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"Even though the license of the bearing alignment invention was terminated by Lear's letter of April 8, 1959 and of no further force or effect, Lear is nevertheless liable to Adkins for royalties if you find that any products covered by Adkins' patent were thereafter manufactured and sold by Lear." [p. 3080].

Thus, the trial court characterized the action as one to enforce plaintiff's patent apart from the license agreement, and that is what the directed verdict with respect to the 2156 gyros amounts to. If the judgment of the trial court were to be upheld, it would be *res judicata* that defendant is liable for any 2156 gyros that defendant sells during the life of plaintiff's patent which expires on January 5, 1977.

However, any rights which plaintiff has with respect to his patent, apart from those based upon the license agreement [Ex. 8], must be based upon his statutory patent rights, and not upon the common law or upon state law. Such rights arise under the United States Patent Laws, and the state courts do not have jurisdiction to enforce such rights.

28 U.S.C. 1338 states:

"(a) The district courts shall have original jurisdiction of any civil action arising under any Act of Congress relating to patents, copyrights and trademarks. Such jurisdiction shall be exclusive of the courts of the states in patent and copyright cases."

Rights under state law which conflict with the objectives of the Federal patent laws have been considered recently by the United States Supreme Court and by many lower courts.

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In *Sears, Roebuck & Co. v. Stiffel Co.* (1964), 376 U.S. 225, 11 L. Ed. 2d 661, the trial court and the Court of Appeals held a patent invalid for want of invention and then awarded damages to the plaintiff anyway on the grounds of unfair competition. With reference to a cause of action under state law concerning the device of the patented invention, the Supreme Court stated:

> "Just as a State cannot encroach upon the federal patent laws directly, it cannot, under some other law, such as that forbidding unfair competition, give protection of a kind that clashes with the objectives of the Federal patent laws.
>
> "In the present case the 'pole lamp' sold by Stiffel has been held not to be entitled to the protection of either a mechanical or a design patent. An unpatentable article, like an article on which the patent has expired, is in the public domain and may be made and sold by whoever chooses to do so."

In *Compco Corp. v. Day-Brite Lighting, Inc.* (1964), 367 U.S. 234, 11 L. Ed. 2d 669, the Court was faced with a similar situation in which the trial court and the Court of Appeals had held the patent invalid and in the public domain. The Supreme Court held that damages cannot be imposed under state law with respect to copying the patented device because this would:

> ". . . interfere with the federal policy, found in Art. I, § 8, Cl. 8, of the Constitution and in the implementing federal statutes, of allowing free access to copy whatever the federal patent and copyright laws leave in the public domain. Here Day-Brite's fixture has been held not to be entitled to

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a design or mechanical patent. Under the federal patent laws it is, therefore, in the public domain and can be copied in every detail by whoever pleases."

With reference to the first cause of action based upon the express agreement concerning plaintiff's patent, the trial court found that the agreement was terminated. As an incident to interpretation of the agreement, and as an incident to plaintiff's allegation of unjust enrichment under *Seagren v. Smith,* and as an incident to the defenses of failure of consideration to support any kind of obligation, the trial court properly considered the validity of plaintiff's patent and held it invalid. Accordingly, damages cannot thereafter be imposed against defendant under guise of state law, such as on the theory of unjust enrichment found in the case of *Seagren v. Smith.* To award damages on unjust enrichment would interfere with the federal policy, found in Art. I, §8 of the Constitution and in the implementing federal statutes as set forth in the *Compco* and *Sears* cases.

The *Sears* and *Compco* decisions were considered in *Jerrold Stephens Co. v. Alladin Plastics, Inc.* (S.D. Calif. 1964), 229 F. Supp. 536 at page 539 where the court stated that these cases:

> ". . . settle, as a matter of law, the proposition that where a party depends upon the Federal Patent Laws, it cannot, under common law State right or Statutory State right recover for unfair competition."

In the present case only rights available to plaintiff were those arising under the agreement on patentable claims. The agreement has been terminated, and

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plaintiff cannot now assert some other right under the common law or under state law, such as the unjust enrichment doctrine of *Seagren v. Smith,* in an attempt to enforce the patent rights which have been declared to be invalid and hence in the public domain.

The *Sears* and *Compco* decisions were also considered in *Cable Vision, Inc. v. KUTV, Inc.* (9th Cir. 1964), 335 F. 2d 348, at page 351, where the court stated with reference to counts for unfair competition and contract interference and violation of quasi property rights:

> "To the extent, then, that the District Court holding extended a new protectible interest beyond what the copyright laws confer, it '* * * interfere(d) with the federal policy * * * of allowing free access to copy whatever the federal patent and copyright laws leave in the public domain.' Compco Corp. v. Day-Brite Lighting, Inc. 376 U. S. 234, 237, 84 S. Ct. 779, 782 (1964). This same principle likewise applies to appellees' claim of contract interference. Parties by mere expedient of an exclusive contract can not 'bootstrap' into existence rights from subject matter which at their source lie in the public domain."

In a Law Review article entitled "Protection of the Inventor Outside the Patent System" the commentator stated:

> "The common law, stressing secrecy, and the patent statutes, stressing disclosure, are mutually inconsistent, at least to a considerable extent. Although a patent application is not destructive of secrecy, the issued patent contains the patentee's full and voluntary public disclosure. Accordingly,

common law protection is thereafter unavailable even though the patent may ultimately prove void." 43 Cal. Law Rev. 457, 467 (1955).

California statutory law is in accordance with the above quotations to the effect that plaintiff has no protectible property rights under the common law or under state law.

California Civil Code, Section 980(b) states:

"The inventor or proprietor of any invention or design, with or without delineation, or other graphical representation, has an exclusive ownership therein, and in the representation or expression thereof, which continues so long as the invention or design and the representations or expressions thereof made by him remain in his possession."

California Civil Code Section 983(b) states:

"If the owner of any invention or design intentionally makes it public, a copy or reproduction may be made public by any person, without responsibility to the owner, so far as the law of this State is concerned."

Prior to 1947, Civil Code Sections 980 and 983 were at times construed as providing that "ideas" were protectible property. However, the sections were amended in 1947 to unequivocally exclude "ideas" and California statutory law is now in accord with the common law with respect to ideas.

Desny v. Wilder (1956), 46 Cal. 2d 715, 732;
Thompson v. California Brewing Co. (1957), 150 Cal. App. 2d 469.

[63]

Plaintiff's alleged invention has not remained in his possession, and he has intentionally made it public. The 2156 gyros were sold and shipped to customers as early as 1956 [p. 1116, line 8; Ex. 48]. The patent which plaintiff asserts cover the 2156 gyros became a public document on January 5, 1960. In accordance with Civil Code Sections 980 and 983 plaintiff has no protectible property rights in the 2156 gyros after 1956 "so far as the law of this state is concerned", other than the rights with respect to defendant which were created by the license agreement. Those rights were terminated on April 8, 1959.

These code sections were considered by this Court in *Shanahan v. Macco Construction Co., Inc.* (1964), 224 Cal. App. 2d 327. This Court found that any common law rights which Shanahan had in housing plans and designs were extinguished when the plans and the structures were made public. Shanahan also asserted a count for unfair competition and unjust enrichment, just as plaintiff in the present is asserting unjust enrichment under *Seagren v. Smith*. This court found that there was no property right in Shanahan to support a count for unjust enrichment. The court stated at page 340:

> ". . . In any event Civil Code section 983, subdivision (b), protects defendants, in view of the findings, from any liability for unjust enrichment under these circumstances. Also, under the common law decisions, by publishing their plans plaintiffs lost all rights to protection against the use or appropriation by another of such plans. After voluntary publication these plans were 'free as the air to common use.'"

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Adkins has no property rights in the present case to support recovery on any theory over which the state courts have jurisdiction including breach of contract and unjust enrichment.

The trial court's rulings and directed verdict which impose liability on "any products covered by Adkins' patent" even though the license agreement was terminated and of "no further force or effect" [pp. 3080, 3092] are void because the state court does not have jurisdiction or power to enforce United States Letters Patents apart from the license agreement.

IV.

There Is No Basis for Any Implied Obligation.

Plaintiff has asserted that in view of the issuance of plaintiff's patent in 1960 defendant had an implied obligation to pay royalties on many products which defendant sold after the agreement was terminated, and which plaintiff asserts are within the scope of the license agreement and the claims which issued in the patent [Clk. Tr. pp. 2313, 2323]. However, the agreement itself negates any implied obligations.

Plaintiff's statement of legal and factual contentions for the pretrial proceedings states with respect to the license agreement [Ex. 8]:

> "Said agreement is clear and unambiguous and requires no reference to either prior documentation or negotiations, but requires construction only in accordance with settled principles and canons of construction." [Clk. Tr. p. 1407, lines 21-24].

Pages 31-35 of John S. Adkins' "Answering Brief to the 'Opening Brief for Lear Concerning the Directed Verdict and the Denial of Lear's Motion for Judgment Notwithstanding the Verdict, All With Respect to the 2156 Gyroscope.'"

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the unjust enrichment theory of *Seagren v. Smith* for the period after April 8, 1959 is wholly irrelevant on this appeal if the license agreement was never terminated, as the same result would pertain both for the 2156 gyro and the steel gyros.

A. Lear Could Not Exercise Paragraph 2(a) Termination Without Prior or Concurrent Cessation of Manufacture of Covered Gyros, and Its Purported Termination on April 8, 1959 Was Only a Breach of Contract.

In paragraph 2(a) of the license agreement Lear is given the right "on ninety days prior written notice to Adkins to terminate any one or more of the licenses herein granted." This paragraph, however, is silent on the question of under what circumstances Lear may exercise that right, and is also silent on Lear's duty to pay royalties on products manufactured after notice of termination.

Paragraphs 2(a), 3(g), 6, 8 and 10 all pertain to various rights of termination, and, consequently, must be read together in deciding whether Lear may validly exercise 2(a) termination while continuing to manufacture and sell the very same gyros, *O'Connor v. West Sacramento Co.* (1922), 189 Cal. 7, 11. When these paragraphs are considered together, the conclusion is inescapable that Lear may only terminate under paragraph 2(a) if prior thereto or concurrently therewith Lear ceases manufacture of all covered gyros, in which event Lear has ninety days in which to complete manufacture and sale of gyros in progress.

The obvious purpose of paragraph 2(a) was to permit Lear to terminate annual minimum royalty payments if Lear ceased manufacture of covered gyros, as under

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paragraph 3(g) Lear would have to pay substantial yearly minimum royalties for 17 years even if it did not manufacture as long as the license was in effect.

It is absurd to assume that Adkins was exchanging his right to a "mutually satisfactory royalty" under the first agreement of December 29, 1951 for $500.00 upon execution of the license agreement (p. 2), which would be the only certain consideration if, in conjunction with the right not to manufacture at all (paragraph 3(g)), Lear also had the right to terminate and continue manufacture royalty-free under paragraph 2(a). There is not one indication in the license agreement that Lear could, by its own unilateral act, terminate its obligation to pay royalties under paragraph 2(a) while continuing to manufacture and sell covered gyros.

The *only* provision enabling Lear to terminate and manufacture without "further royalt[y] [payments]" is expressly covered in paragraph 6 in the event of adjudication of invalidity or non-issuance of "substantial claims".

Since Lear's only rights to terminate and thereafter manufacture royalty-free are expressly covered in paragraph 6, such rights are not to be read into paragraph 2(a). Paragraph 6 would be wholly redundant if Lear could for any reason and at any time terminate the license agreement under paragraph 2(a) and escape further payment of royalties.

Under paragraph 3(g) Adkins could terminate Lear's right to manufacture covered gyros if Lear was in breach by failing to make minimum royalty payments, and Lear thereafter had ninety days in which to complete manufacture and sale of gyros then in progress and is thereafter expressly prohibited from further manufacture.

[33]

It would be equally absurd to say that where Adkins can prevent further manufacture if Lear fails to pay minimum royalties, Lear can escape its obligation to pay both minimum *and* earned royalties by terminating under paragraph 2(a) and thereby also acquire the new right to manufacture free of any royalty at all. The 90-day grace period of paragraph 3(g) is solely for Lear's benefit. It must also be assumed that the 90-day grace period of paragraph 2(a) is also solely for Lear's benefit, since it can be of no benefit to Adkins in the absence of a duty to manufacture. Therefore, prior or concurrent cessation of manufacture arises in paragraph 2(a) by necessary implication to give effect to the 90-day grace period and prevent it from being meaningless.

Paragraph 11 gives Lear four options upon Adkins' leaving Lear's employ, three of which require payment of minimum royalties and one earned royalties only. If Lear could terminate under paragraph 2(a), continue to manufacture and pay no royalties at all, this would constitute a fifth option and would result in an absurdity, as obviously Lear would always exercise a paragraph 2(a) termination. In other words, Lear's construction of paragraph 2(a) makes paragraph 11 wholly useless.

In addition, implying a condition precedent of prior or concurrent cessation of manufacture into paragraph 2(a) is compelled by C.C. §1655 and §1656, whereunder provisions which are necessary to make an agreement reasonable and capable of being carried into effect are implied as a matter of law. Any interpretation which would allow Lear to terminate under paragraph 2(a) while continuing to manufacture the very same gyros royalty-free would be the most unreasonable construction of this paragraph that is conceivable. Clearly, Ad-

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kins was not giving, and Lear could not reasonably understand that it was acquiring, the right to unilaterally end all royalty payments at any time and for any reason.

Pertinent canons of construction are contained in C.C. §1635, *et seq.* These rules of construction require that a contract be interpreted to give effect to the intention of the parties "as it existed at the time of contracting" (§1636); that the language employed, if clear and explicit, is controlling unless it results in an "absurdity" (§1638); that each clause is to be given meaning and used in interpreting every other clause (§1641), *Kohn v. Kohn* (1950), 95 Cal. App. 2d 708; that an interpretation which makes the agreement "reasonable" and "capable of being carried into effect" is required (§1643); and that any uncertainty is interpreted "most strongly" against the party who caused the uncertainty to exist (§1654), *Hunt v. United Bank and Trust Co.* (1930), 210 Cal. 108.

In applying these canons, "stipulations which are necessary to make a contract reasonable . . . are implied" (§1655) *as a matter of law,* and all provisions necessary to carry the agreement into effect are also implied (§1656) *as a matter of law, Brawley v. Crosby Research Foundation* (1946), 73 Cal. App. 2d 103.

Applying these canons of construction and implying stipulations which are necessary to make the contract reasonable does not make a new contract for the parties, as Lear asserts. Rather, it results in a construction of the contract in accordance with the parties' actual intent.

Lear argues, however, that because its obligation to cease manufacture if Adkins terminates is discussed in paragraph 3(g), the obligation to cease manufacture

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cannot be read as a condition precedent to its right to terminate under paragraph 2(a). The cases it cites for the proposition that where a particular obligation is discussed in one part of an agreement it is not read into another part are, however, distinguishable, since they hold only that additional obligations will not be imposed on the same party. Moreover, the rule is only an aid to construction and not an absolute to be applied when other canons of construction reach a more reasonable result.

Lastly, it should not be forgotten that Lear drafted the license agreement[55] and caused the uncertainty, if any, in paragraph 2(a) to exist.

B. Lear Could Not Exercise Paragraph 6 Termination Until After Final Patent Office Action, Which Did Not Occur Until January 5, 1960, and Its Purported Termination on April 8, 1959 Was Only a Breach of Contract.

Paragraph 6 of the license agreement provides, in material part, as follows:

> "[In the event] the United States Patent Office refuses to issue a patent on the substantial claims [of the application attached as Exhibit B] or if such a patent so issued is subsequently held invalid . . . Lear at its option shall have the right forthwith to terminate the specific license so affected or to terminate this entire Agreement and no further royalties shall thereupon be payable under the license so terminated or under this Agreement if Lear shall have elected to terminate this Agreement in its entirety."

Obviously, the parties did not intend that Lear could incorrectly anticipate final Patent Office action and con-

Pages 94-96 and 109 of Lear's "Respondent's and Cross-Appellant's Opening Brief."

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agraphs 2(a) and 6 thereof, Lear, Incorporated hereby exercises its rights and options to terminate the agreement and the licenses therein granted."

It is undisputed that defendant submitted this written notice to the plaintiff and that the plaintiff received the notice [Clk. Tr. p. 1127, lines 15-17]. This written notice complies exactly with the provisions of §§2(a) and 6 of the license agreement of Ex. 8 concerning termination of the agreement. The termination provision of §2(a) is unequivocal and the only condition required is ninety days' written notice. This termination provision states:

". . . Lear shall have the right on ninety days' prior written notice to Adkins, to terminate any one or more of the licenses herein granted."

1. Defendant Terminated After Plaintiff Failed to Perform Under the Agreement.

Section 6 of the agreement gave defendant the right to forthwith terminate the agreement or any one of the licenses thereof in the event, *inter alia,* that the United States Patent Office refused to issue a patent on the substantial claims of plaintiff's patent application. After repeated refusals by the United States Patent Office to issue a patent on the substantial claims over a five-year period of time, defendant served the required notice and terminated the agreement also pursuant to §6. Section 6 [p. 11 of Ex. 8] of the agreement, as far as Exhibit B to the agreement or plaintiff's patent application Serial No. 410,237 is concerned, states that

". . . in the event the U.S. Patent Office refuses to issue a patent on the substantial claims of the application attached to Exhibit 'B', or if such a patent so issued is subsequently held invalid . . . then in

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any of such events Lear at its option shall have the right forthwith to terminate the specific license so affected or to terminate this entire Agreement and *no further royalties shall thereupon be payable* under the license so terminated or under this Agreement if Lear shall have elected to terminate this Agreement in its entirety." [Emphasis added.]

It is to be noted that the agreement does not require defendant to wait until final action by the United States Patent Office before serving notice of termination under §6 of the license agreement. The agreement itself does not require final action and final action is not required or implied by law. *Marvin v. Mills Alloys, Inc.* (1939), 31 Cal. App. 2d 549.

The §6 termination provision states that in the event the United States Patent Office refuses to issue a patent on the "substantial claims," defendant at its option shall have the right to forthwith terminate. The "substantial claims" are those that were in the patent application on September 15, 1955, or equivalents thereof, and the Patent Office refused to allow such claims [Ex. P].

Paragraph 17 of the license agreement [Ex. 8] states:

"It is hereby specifically agreed and understood by the parties that on the date of execution hereof the MA-1 compass Lear Model No. 5005, the Directional Steel Gyro Lear Model No. 2152, and the Vertical Steel Gyro Lear Model No. 2153, are the only products manufactured by Lear under the licenses herein granted, *which contain any of the inventions or claims* described and covered by the respective Exhibits under this Agreement." [Emphasis added.]

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During the second week of the trial the Judge stated:

> "In Paragraph 17 there was an application pending. It refers to the inventions of or claims described and covered by their respective exhibits under the agreement. . . . Well, I am going to hold that Paragraph 17 was composed in view of the claims, the inventions which were embodied in the exhibit attached to the agreement at that time. . . ." [p. 1066, lines 2-9].

A review of the file history [Ex. P] and the finally issued patent [Ex. 10] clearly shows that the claims that were in the patent application at the time the agreement was executed were never allowed, that no method claims were ever allowed, that the claims that were allowed were of a completely different type than those contemplated by the parties upon the execution of the agreement, and that the claims and even the description which forms the basis for the claims were changed so that additional matter was added over and above that which existed on September 15, 1955. Furthermore, there were no claims of any type allowed concerning bearing alignment methods on April 8, 1959, when Lear terminated the agreement and this was five years after plaintiff had filed his patent application and nearly four years after the execution of the license agreement. Thus, it is clear that Lear properly terminated the license agreement under §6 in that the U. S. Patent Office had refused to issue a patent on the substantial claims relating to bearing alignment. This refusal occurred first on March 21, 1957 [Ex. P, p. 44] and it was repeated on June 20, 1958 [Ex. P, p. 57].

[109]

§405, page 621; *Ellis Patent Assignments and Licenses,* Second Ed., §697, page 733, §770, page 779.

It is a recognized principle of law that when a license agreement provides a grant of a right to either manufacture, use, or sell a product incorporating a patented invention, the licensee is estopped to contest the validity of the licensed patent only as long as the licensee is operating under the license.

The Armstrong Company v. Shell Company of California (1929), 98 Cal. App. 769;

Automatic Radio Manufacturing Company v. Hazeltine Research, Inc. (1949), 339 U.S. 827, 70 S. Ct. 894, 94 L. Ed. 1312;

Del Riccio v. Photochart (1954), 124 Cal. App. 2d 301.

This is not only "the modern rule" as plaintiff likes to call it (Pltf. Op. Br. p. 78), but it is also the "old" rule as well. *Patent Assignments and Licenses* by Ridsdale Ellis (1936), §376, page 428. This rule was set out in the 1939 case of *The Armstrong Co. v. Shell Company of California, supra,* at 778 as follows:

> "It is a well-recognized rule of law that a licensee under a patent right cannot dispute the validity of his licensor's patent."

This estoppel lasts only so long as the licensee operates under the license agreement. This estoppel arises not because of express terms in the agreement but because the licensee is using and enjoying the benefit and protection of the rights covered by the agreement and should not be permitted to reap the benefits of the agreement and at the same time contest the validity of the patents to show failure of consideration for the agreement.

Opinion of the District Court of Appeal.

In the District Court of Appeal of the State of California, Second Appellate District, Division Two.

John S. Adkins, Plaintiff, Appellant and Cross-Respondent, vs. Lear, Incorporated, Defendant, Respondent and Cross-Appellant. Civ. Nos. 28624, 29770, 30052, 30089.

Filed Aug. 8, 1966.

Appeals from judgment and orders of the Superior Court for Los Angeles County. Brodie Ahlport, Judge. Judgment n.o.v., reversed. Order denying defendant's motion for judgment n.o.v. in part, reversed. Order granting new trial, affirmed. Judgment as amended dismissing second cause of action, affirmed. Action remanded for new trial on issue of damages only. Appeals from order granting motion for judgment n.o.v. in part, and from order apportioning costs of audit dismissed.

Rosenfeld, Meyer & Susman, and Peter R. Cohen, for Appellant.

Christie, Parker & Hale, C. Russell Hale, Edwin L. Hartz, and Kenneth C. Newell, for Respondent.

This is an action for damages for breach of an agreement dated September 15, 1955, hereafter referred to as the license agreement, and for unjust enrichment (first cause of action) and, in the alternative for breach of an implied contract, misappropriation and unjust enrichment (second cause of action).

Plaintiff Adkins, under the license agreement, granted an exclusive license to defendant Lear, Incorporated, herein referred to as Lear, to manufacture

and sell "products and parts and components thereof (including gyros, gyro systems, gyro apparatus and gyro mechanisms) covered by or containing one or more of all the inventions and any patents issued or hereafter issued thereon," under the claims of Adkins' then pending application for a patent, upon payment of agreed royalties. It was understood by the parties that the word "claims" as used in the license agreement shall mean the claims of the then pending application for a patent "which have been or will be patentable by Adkins." The agreed royalties were to be paid only "[w]hile one or more of the licenses granted under this Agreement is in effect."[1]

The case was tried to a jury on the first cause of action on Adkins' claim for damages with respect to five models of gyroscopes manufactured by Lear. As to one model, No. 2156, the court directed a verdict for Adkins. On the other four models, Nos. 2151, 2152, 2153 and 2171, here collectively referred to as the "steel" gyros, the jury returned a verdict in favor of Adkins. Judgment on the verdict on the first cause of action was entered on May 4, 1964. On July 2, 1964, the court (1) denied Lear's motion for judgment n.o.v. on model 2156; (2) granted the motion as to the other four models; and (3) granted Lear's motion for a new trial in the alternative as to all models. Judgment n.o.v. was entered accordingly on July 15, 1964.

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[1]Adkins in fact granted Lear three licenses in identical terms under the claims of a certain patent referred to as "Exhibit 'A'", and under the claims of certain patent applications referred to as "Exhibit 'B'" and "Exhibit 'C'". The only license involved here is that under the claims of "Exhibit 'B'", being the application for letters patent filed by Adkins on February 15, 1954, "and all patents issued or issuing thereon to Adkins with respect to the inventions disclosed or intended to be disclosed therein."

Civ. No. 28624 includes (1) Adkins' appeal from the judgment n.o.v. for Lear on the "steel" gyros and from the order granting Lear's motion for a new trial; (2) Lear's appeal from the judgment on the directed verdict as to model 2156 and from the denial of its motion for judgment n.o.v. on that model; and (3) Lear's appeal from the whole of the judgment entered May 4, 1964.

The judgment was amended December 30, 1964, dismissing Adkins' second cause of action pursuant to the mandate of this court in Civ. No. 28603.

Civ. No. 30089 includes Lear's renewed appeal as to items (2) and (3) in Civ. No. 28624 (renoticed as a matter of precaution), and its appeal from the amendment of December 30, except as to the dismissal of the second cause of action.

Civ. No. 30052 is Adkins' appeal from the dismissal of his second cause of action by the judgment as amended December 30, 1964.

Civ. No. 29770 is Adkins' appeal from an order apportioning the cost of an independent audit during discovery proceedings.

Factual Background

Adkins is a mechanical engineer. Lear is a manufacturer of aircraft flight instruments, including gyroscopes, gyro systems, gyro apparatus and gyro mechanisms, with a research and development facility in Santa Monica, California, and a development and production facility in Grand Rapids, Michigan.

Adkins joined Lear in Santa Monica as an inventor in January 1952, following the execution of an agreement in December 1951 in which Adkins agreed

in substance to disclose and license to Lear all ideas, discoveries and inventions relating to gyroscopes, hereafter referred to as gyros, in return for a "mutually satisfactory roylty." Upon his employment Adkins went to work in Santa Monica developing gyros with higher precision than those then being manufactured by Lear which could be produced at a lower cost.

We are concerned here with the manufacture of gyroscopes as used in aircraft to tell the pilot the direction and attitude of the aircraft. Simply stated, the gyro maintains its fixed position in space and the movements of the aircraft around it are measured electronically and recorded on gauges. In all gyros in issue here there is a part called a rotor, driven electrically at high speed. The rotor is mounted in a "gimbal ring", sometimes called the inner gimbal ring or inner axis, which in turn is mounted on the outer gimbal ring or axis, the whole structure being mounted in a frame fixed to the aircraft. Each gimbal ring, when fully assembled, has two short axle ends 180° apart, called trunions, which lie on a common axis. Each trunion is inserted into a bearing element which is fixed in the gimbal assembled around it. Each bearing element consists of an inner and an outer race or ring and a plurality of balls between the two races. The most important factor in achieving gyro accuracy is accurate alignment of the pair of ball bearing elements on the opposite ends of the gimbals with each other. The faces of the bearing elements must be parallel with each other and the centers must be coaxial with each other in order to avoid friction and consequent drift of the gyro rotor from its stable position in space. Gyros which indicate the direction of the aircraft are known as directional

gyros, while those which indicate its pitch and roll are known as vertical gyros.

In the summer of 1952, after experimenting with and rejecting the use of self-aligning ball bearing elements or cups, Adkins conceived his invention of a means of holding a pair of bearing elements in prealigned coaxial and parallel relationship to each other and cementing them in place in oversize holes in the gimbal, and immediately communicated his invention to Lear. By September 1952 Adkins had completed two experimental models for vertical gyros with cemented in bearing elements. At this time Lear was engaged in producing vertical gyros for the Air Force in a competition with other manufacturers. It was accordingly decided that Adkins would work on directional gyros and Lear, at Grand Rapids, would begin experimental work on improving its vertical gyros. Both, of course, were working on the production at low cost gyros having a high precision which would be more difficult for Lear's competition to obtain. Thereafter Adkins adapted his invention to the Navy requirements for a directional gyro system known as the MA-1 Compass System. The gyro in this system was designated as model 2156.

In its experiments at Grand Rapids, Lear first used a flanged cylindrical bearing element fitting into a cylindrical hole in the gimbal and a flat metal washer with two knife-like projections placed over the cylindrical portions of the bearing cup, referred to at the trial as a "tippy washer," which permitted the bearing element when inserted in the receiving hole to rock on the washer in two different planes. This was referred to at the trial as a self-aligning "knife edge" type of con-

struction. In the fall of 1953, Lear abandoned this type of construction in its models 2151 and 2152 and decided to adopt the construction used by Adkins in model 2156. The first such use of this method was in October 1953. The evidence shows that some time later the same method of construction was used by Lear in the construction of models 2151 and 2171. The only difference between model 2156 as developed by Adkins and the other models as developed by Lear in Michigan was in the shapes of the bearing elements and receiving holes and in the size of the flange used in the bearing element in model 2171.

As originally filed in February 1954, Adkins' application for a patent, described as Exhibit "B" in the agreement, and so far as material here, included the following claims: "7. A method of aligning bearings supporting a relatively movable element . . .; 8. A method of aligning bearings in coaxial relationship and parallel planes for supporting a rotable element in mounting, . . .; 9. An alignable bearing structure for supporting an element movable with respect to another element,. . . ." Examination of the file wrapper shows that these claims were rejected by the Patent Office September 18, 1954, "as being substantially fully met by the patent to Carlson." On March 7, 1955, Adkins cancelled claims 7 and 8, amended claim 9 in one particular, and submitted new claims 18 and 19 with reference to the "method of bearing alignment." This was the status of the application when the license agreement was executed.

It should be said here that, as a part of the consideration for the licenses granted to it, Lear reimbursed Adkins for patent costs already incurred by him and

agreed to pay all costs for preparation and prosecution of all applications for patents on inventions set forth and disclosed in Exhibit "B", provided Adkins secured Lear's prior written approval therefor. Adkins agreed to prosecute his applications and to "submit all such applications to Lear for approval prior to the filing thereof." It was further agreed that "Adkins shall immediately upon receipt by him, furnish to Lear a copy of each action taken by the U.S. Patent Office with respect to such applications and to consult with Lear before taking any action with respect thereto, and also to notify Lear when a patent or patents have issued."

On March 21, 1957, the Patent Office notified Adkins that "Claims 9, 18, and 19 are rejected as being obviously fully met by the patent to Grenat." Thus it appears that all Adkins' claims had been rejected by the Patent Office when Lear wrote Adkins on September 10, 1957, that his application, Exhibit "B", "does not disclose any inventions utilized in any Lear equipment except the MA-1 system and certain components thereof [model 2156]. Specifically, we do not believe that any models of the so-called 'Steel Gyro' come within the scope of Exhibit 'B'. We have made a search of the U.S. Patent Office files and believe that the method of bearing alignment heretofore and currently used in assembling the Lear 'Steel' gyroscopes is not patentable."

In response to the Patent Office action of March 21, 1957, Adkins again amended his application on September 27, 1957, further amending claims 9, 18 and 19, and adding new claims 20 and 21, each on an "alignable bearing construction." A supplemental amendment, dated December 31, 1957, adding new claims 22

through 26, each on "an alignable bearing construction", was filed with the Patent Office January 13, 1958, shortly after Adkins terminated his employment with Lear. On January 20, 1958, the Patent Office rejected amended claims 9, 18 and 19 "as being fully met by Grenat," and rejected the new claims 20 through 26 "as being fully met by the patent to Sperry."

On December 22, 1958, Adkins filed a further amendment to claim 9 and submitted new claims 27 and 28 in place of claims 18 and 19, and added certain new material to the specifications. On March 4, 1959, Adkins cancelled his claims 9, 27 and 28 and substituted new claims 29 through 41, claims 29 through 36 being on "an apparatus for supporting bearings in aligned relationship." The application as thus amended was pending when Lear wrote Adkins on April 8, 1959, that it was "exercising its rights and options to terminate the agreement and the licenses therein granted." On July 21, 1959, the new claims 29 through 36 were allowed and renumbered by the Patent Office as claims 9 through 16, and a patent on those claims was issued January 5, 1960.

Adkins' complaint was filed in January 1960 shortly after the issuance of the patent. After extensive discovery and pretrial proceedings the case went to trial in 1964 on the first cause of action only.

Appeals Relating to
the Judgment N.O.V.

Adkins sought to recover damages for breach of the license agreement and for unjust enrichment after the purported termination of the agreement by Lear in April 1959, based primarily on claims 9, 13, 14 and 16 of his patent.

During the trial the court denied Lear's motion for a directed verdict, which was made on some twelve grounds, each of which was to the effect that all of Adkins' alleged causes of action "are void and unenforceable" for the reasons stated in the notice of motion. At the conclusion of a lengthy trial, the court on its own motion directed a verdict in favor of Adkins on the 2156 gyro as a part of MA-1 compass system, and it was stipulated that on that model Adkins was entitled to recover $16,351.93 for the period from January 1, 1955 to May 31, 1963. The case then went to the jury on instructions to determine whether the patent was invalid in respect to the four "steel" gyros, whether the patent "covers and is infringed" by one or more of those gyros, and whether the license agreement had been breached by Lear and the damages suffered by Adkins. The jury returned a verdict for Adkins and judgment was entered on May 4, 1964, for $904,474.49 which was the full amount of his claim with interest.

Lear moved for a judgment n.o.v. "upon the grounds stated in defendant's motion for a directed verdict and that there is no sufficient evidence substantially to support a verdict in favor of plaintiff." The court denied the motion as to model 2156, with this comment: "The court directed a verdict for plaintiff for $16,351.93 as royalty under a license agreement for the use of plaintiff's bearing structure as described in patent no. 2-919-586. Defendant's liability for this amount rested upon its status as a licensee. Under the established rule it was estopped to deny the validity of its licensor's patent." The court granted the motion as to the "steel" gyros, holding as to these models that "the rule

of estoppel does not apply," that the patent is invalid, and that "since, as a matter of law, neither of defendant's devices could be the subject of a valid patent to anyone, it follows that plaintiff cannot claim them as equivalents under or as infringing his patent (even if valid)." Judgment was entered accordingly on July 15, 1964, and both Adkins and Lear appealed.

The overall question to be decided on the appeals from the judgment n.o.v. is whether the evidence was sufficient to support the verdict in favor of Adkins. A motion for a judgment n.o.v. may be granted by the trial court "only where, disregarding conflicting evidence on behalf of the defendants and giving to plaintiff's evidence all the value to which it is legally entitled, therein indulging in every legitimate inference which may be drawn from that evidence, the result is a determination that there is no evidence of sufficient substantiality to support a verdict in favor of the plaintiff." (*Reynolds v. Willson,* (1958) 51 Cal.2d 94, 99.) On a motion for a judgment notwithstanding the verdict in favor of defendants the trial court "is not permitted to weigh the evidence, and on an appeal from the judgment entered on the granting of such a motion, the appellate court must read the record in the light most advantageous to the plaintiff, resolve all conflicts in his favor, and give him the benefit of all reasonable inferences in support of the judgment." (*Quintal v. Laurel Grove Hospital,* 62 Cal.2d 154, 159.)

The Scope of the Bargain

The verdict of the jury was necessarily based on the implied finding that the license as granted to Lear extended to the patent issued to Adkins in January 1960, and that the gyros manufactured by Lear were covered

by that patent. A proper construction of the license agreement leads us to the conclusion that there is no substantial evidence to sustain this implied finding.

The parties are agreed that Adkins' right to recover under his first cause of action is based upon the license agreement. Adkins contends that under that agreement he is entitled to the payment of royalties for the use of his invention as defined in the claims of his application for a patent and in the claims of the patent itself. Lear contends that it did not get what it bargained for under the license agreement, in that the invention as there defined was not patentable, and that after the termination of the license agreement in April 1959 it was a stranger to the patent as issued several months later. It was stipulated at the trial that Lear continued to make all five gyros after it had terminated payment on all except model 2156 in September 1957 and after it terminated the license agreement in April 1958. There is no suggestion that the license agreement is ambiguous.

The construction of the license agreement is governed by state law. As the court said in *Farmland Irrigation Co. v. Dopplmaier*, 48 Cal.2d 208: "It has been established by a long line of cases moreover, that an action to set aside, specifically enforce, or recover royalties on a patent license contract is not an action arising under the patent laws of the United States for the purpose of determining the exclusive jurisdiction of the federal courts. [Citations] State courts have jurisdiction over such actions, and in the absence of diversity of citizenship it is exclusive of the federal courts." (P. 217.) "The plaintiff's cause of action arose under and was governed by the general common law of contracts. . . .

[T]he law governing the elements of the plaintiff's cause of action is state law—state law acting of its own force and not merely by incorporation into federal law." (P. 218.) (To the same effect see *Lear Siegler, Inc. v. Adkins,* 300 F. 2d 595, affirming an order staying proceedings in the U.S. District Court relating to the agreement and patent involved here.)

In our opinion the proper construction of the license agreement supports Lear's contentions. The license agreement before us was negotiated after Adkins had disclosed his invention to Lear as required by the agreement of December 29, 1951, and by its express terms cancelled and superseded that agreement. In the license agreement Adkins represented and warranted that "to the best of his knowledge and belief *he is the owner of the inventions* covering the substantial claims as disclosed or intended to be disclosed in the Application for U.S. Patent on gyroscopes attached hereto and hereafter referred to as Exhibit 'B' and incorporated herein as a part hereof, which application was filed February 15, 1954, and is presently pending in the United States Patent Office and that there are no licenses or agreements outstanding which prevent him from granting unto Lear *an exclusive license respecting said inventions* and products embodying *said inventions,* in accordance with the provisions hereof, . . ." "[I]n consideration of the foregoing and $500.00 in hand paid, . . . and of the covenants and conditions hereinafter contained," Adkins granted to Lear "(2) *an exclusive license under all the claims* of Exhibit 'B' . . .; it is understood, however, *that whenever the word 'claims' is used* in this paragraph *it shall mean the claims in the respective Exhibits which* have been patented or

will be patentable by Adkins." Exhibit "B" is "deemed to refer to and include" Adkins' application for a patent filed February 15, 1954, "and all patents issuing thereon to Adkins with respect to the inventions disclosed or intended to be disclosed therein." An invention as used in the agreement is defined in 1(d) as: "The term 'said inventions' as used in this Agreement shall include . . . (2) all claims and inventions disclosed or intended to be disclosed in said Exhibit 'B' . . . *but only to the extent that such claims or inventions* mentioned in said Exhibits *are patented or patentable by Adkins.*"

Paragraph 3(a) of the agreement relating to royalties provides that while the license is in effect, "Lear agrees to pay Adkins with respect to products incorporating *said inventions* [see definitions above] . . . royalties of 1¼% based on net sales prices . . . received by Lear for said products, *it being understood that said rate shall be paid only on products incorporating* one or more or all of *said inventions.*" (Emphasis added.) Under paragraph 3(g) "[u]nless this Agreement is sooner terminated as herein provided," Adkins was entitled to receive certain minimum royalties on account of "products manufactured and sold by Lear," provided the license as to Exhibit "B" "in force and effect, . . . (b) embodying the inventions disclosed or intended to be disclosed in Exhibit 'B'," as a credit in reduction of the royalty payments due Adkins under paragraph 3 for each year.

We think it is evident from the provisions of the license agreement that what Lear was interested in and willing to pay for was the right to use Adkins' invention, that is, the right to use what was new and con-

stituted progress over apparatus already known to the trade which were patentable by Adkins. It seems highly improbable that Lear would agree to pay royalties indefinitely on parts long known, and which until the time of the license it could have manufactured and sold royalty free. The provisions defining sums received from license sales provide in effect that a royalty would be due on sums received on sales of products incorporating Adkins' inventions to the extent only that the claims of his then pending application were patentable. The agreement to continue the payment of royalties is tied directly to the test of the patentability of the claims of his then pending application. (Cf. *Farmland Irrigation Co. v. Dopplmaier,* 48 Cal.2d 208, 224-225; and cf. *Eastman Oil Etc. Corp. v. Lane-Wells Co.;* 21 Cal.2d 872, holding that "the term royalty ordinarily envisages a duty to make and a corresponding right to the use of patented methods on machines.")

The question here is whether Adkins' inventions as described in the claims of his application were patentable. By repeatedly expressing this requirement in the license agreement, the parties intended that unless the invention was patentable under the laws of the United States, Lear would be under no continuing legal obligation to Adkins. Thus we are required to focus our attention "on the patentability of inventions under the standard of Art. I, § 8, ch. 8, of the Constitution and under the conditions prescribed by the laws of the United States," (*Graham v. John Deere Co.,* 383 U.S. 1, 15 L.Ed.2d 545,) rather than on the "validity" of the patent *per se.*

It is beside the point that when the license agreement was executed, the parties agreed that "the MA-1

compass Lear Model No. 5005 [incorporating gyro model 2156], the Directional Steel Gyro Lear Model No. 2152, and the Vertical Steel Gyro Lear Model No. 2153, are the only products manufactured by Lear under the licenses herein granted, which contain any of the inventions or claims described and covered by the respective Exhibits of this Agreement," and it is equally beside the point that the invention was later incorporated in Lear's models Nos. 2151 and 2157. At the most, Adkins had but one "invention" which he first disclosed to Lear in July 1952, and on which he later applied for a patent. Adkins' right under the license agreement to the continued payment of royalties was expressly conditioned upon the patentability of that invention and the claims of his application for a patent. If that invention as so claimed was not patentable, either as incorporated in model 2156 as developed by Adkins in Santa Monica or in the "steel" gyros in which it was used by Lear in Grand Rapids, Lear's continuing obligation to pay royalties thereon would come to an end.

The provisions of the license agreement just referred to must be read "in the light of the subject matter of the contract and the apparent intention of the parties." (*Eastman Oil Etc. Corp. v. Lane-Wells Co.*, 21 Cal.2d 872, 873.) Since the patentability of the invention could only be determined in the first instance by the Patent Office and ultimately by the courts (*Graham v. John Deere Co.*, 383 U.S. 1, 15 L.Ed.2d 545), neither the license agreement that certain products manufactured by Lear in September 1955 incorporated Adkins' inventions or claims described and covered by Exhibit "B", nor Lear's letter of September 1957 can be considered as an admission by Lear that Adkins' invention was patentable.

As we have seen, the license agreement here was entered into in consideration of the patentability of Adkins' "invention" and the claims described in Exhibit "B". In September 1957 Lear concluded that Adkins' patent application did not disclose any inventions utilized by any Lear equipment, and that the method of bearing alignment used by Lear in assembling the "steel" gyros is not patentable. This conclusion was obviously based on the Patent Office action of March 1957 rejecting Adkins' claims as they stood at the time the license agreement was executed, and fairly anticipated the Patent Office action of January 20, 1958, rejecting the claims as amended by Adkins in March 1957 and on January 13, 1958. The actions of the Patent Office in March 1957 and in January 1958 rejecting all claims then pending constituted "final adverse action by the Patent Office". Adkins recognized the finality of this action in March 1959 when he cancelled all his previous claims and submitted the new claims on which the patent was finally issued. The issuance of the patent in January 1960 did not revive the claims which had been rejected. "It is well established that the claims of a patent must be read and interpreted in the light of claims which had been rejected. . . . Claims which have been allowed cannot, by construction, be read to cover what has thus been eliminated from the patent. *Schriber-Schroth Co. v. Cleveland Trust Co.*, [311 U.S. 211], (rehearing denied 312 U.S. 654, 61 S.Ct. 235, 85 L.Ed. 132)." (*Oregon Saw Chain Corp. v. McCulloch Motors Corp.*, 323 F.2d 758, 768.) Furthermore, as the court said in *Oregon Saw Chain*, the patentee "cannot regain 'by recourse to the doctrine of equivalents' that which he, by strict construction of the claim, has disclaimed. The doctrine

of equivalents 'at most operates, by liberal construction, to secure to the inventor the full benefits, *not disclaimed,* of the claims allowed'. (*Exhibit Supply Co. v. Ace Corp.,* 1942, 315 U.S. 126 at 136-137, 62 S.Ct. 513, at 518, 86 L.Ed. 736. Emphasis added.)"

Here, in contrast with *Del Riccio v. Photochart,* 124 Cal.App.2d 301, 309-312, the patentability of Adkins' invention was the major, material consideration for the license agreement. When the Patent Office determined that that invention was not patentable "the heart of the contract at bar" failed, and upon giving notice to Adkins of its termination in April 1959, Lear was relieved of its obligations to Adkins under the license agreement after such Patent Office action.

Estoppel to Attack Validity of Patent

Adkins urgently contends that in this action Lear is estopped to attack the validity of his patent. He relies on the rule as stated in *Automatic Radio Mfg. Co. v. Hazeltine Research,* 339 U.S. 827, that "the licensee under a patent license agreement may not challenge the validity of the licensed patent in a suit for royalties due under the contract." He also relies on *Bowers Mfg. Co. v. All-Steel Equipment, Inc.,* 275 F.2d 809, and *Del Riccio v. Photochart,* 124 Cal.App.2d 301, 312, in which this rule was followed. This has always been the rule in California. (*Martin v. Pinney,* 163 Cal. 652, 654.)

We have concluded that there is no basis on which Adkins can invoke the doctrine of estoppel for the reason that the validity of the patent issued to Adkins in January 1960 is not in issue here.

Adkins' contention is necessarily based on the assumption that a patent was issued on the claims of the application described in the license agreement, and that the five gyros involved here were covered by his patent, and on his contention that the license agreement was not validly terminated by Lear. Adkins' assumption that the patent was issued on the claims of his application described in the license agreement is not warranted by the record. As we have seen, the claims of the application as they stood in September 1955 and as amended in March 1957 were all rejected by the Patent Office, and that the patent issued to Adkins in January 1960 was based entirely on the new claims filed by him in July 1959. So far as the rejected claims are concerned, the case thus comes within the rule that when an invention is not patentable, the patent laws preclude an invention from involving the doctrine of estoppel as a means of continuing, as against his license, the benefit of a non-existent monopoly, just as they preclude the licensee from estopping himself "from enjoying rights which it is the policy of the patent laws to free from all restrictions." (*Scott Paper Co. v. Marcalus Mfg. Co.*, 326 U.S. 249, 257, 90 L.Ed. 47, 52.) None of the cases relied on by Adkins is in point here for the reason that each of them involved a licensed patent.

Lear concedes that it would be estopped to contest the validity of any patent issued to Adkins on the claims of his application described in the license agreement so long as it continued to operate under that agreement. It contends, however, not only that no such patent was issued, but further that this estoppel no longer existed after it terminated the agreement in April 1959. It relies on the rule stated in *Stimpson*

Computing Scale Co. v. W. F. Stimpson Co., C.C.A. 7th, 104 F. 893, *The Armstrong Co. v. Shell Oil of California*, 98 Cal.App. 769, 779, and several other cases that after the termination of a license the parties are freed from the estoppel resting upon them, and that thereafter the licensee, in an action for royalties under the license agreement, may attack the validity of a patent issued to the former licensor to the same extent as a stranger might.

The exception relied on by Lear is clearly applicable here. As the court said in *Armstrong* (p. 779): "A licensee is estopped to show the invalidity of licensed patents as a defense to an action for royalties only so long as the relation of licensor and licensee continues and the licensee uses and enjoys the benefit and protection of the patents covered by the agreement. . . . A licensee, if the patents are in fact invalid, may, without waiting to be evicted, denounce and abandon the license, and after giving notice thereof to the licensor, may defend against an action to enforce the license or to recover royalties subsequently accruing, with the same freedom as may a stranger to the patent, and the licensor is remitted to his infringement suit."

On April 8, 1959, Lear gave written notice to Adkins that it thereby "exercises its rights and options to terminate the agreement and the licenses thereunder," referring particularly to paragraphs 2(a) and 6 of the agreement. Lear thus placed itself in the position of a stranger both to the then pending patent application as well and to the patent which was issued some nine months later on the new claims which were not made by Adkins until July 1959.

Adkins' contention that the license agreement was not effectively terminated by Lear's letter of April 8, 1959, is equally without merit. Under paragraph 2 of the agreement, Lear had "the right on ninety days' prior written notice to Adkins, to terminate any one or more of the [three] licenses herein granted," including the license under Exhibit "B". It is provided in paragraph 6, that "in the event the Patent Office refuses to issue a patent on the substantial claims of the application attached as Exhibit 'B', . . . then . . . Lear at its option shall have the right forthwith to terminate the specific license so affected or to terminate this entire Agreement and no further royalties shall thereupon be payable under the license so terminated or under this Agreement if Lear shall have elected to terminate this Agreement in its entirety."

It is apparent from the facts shown in the Patent Office file wrapper delineated above that as of April 8, 1959, the Patent Office had refused to issue a patent on any of the substantial claims of Adkins' application then pending and had, in fact, refused to issue a patent on any of those claims. Lear was thus well within its rights on that date in terminating both the license and the agreement in its entirety. The case is thus distinguishable from *Bowers Mfg. Co. v. All-Steel Equipment, Inc.*, 275 F.2d 809, which involved a licensed patent. There the licensee was held to its agreement because neither of the events set forth in the agreement permitting cancellation had occurred. When, as here, the license agreement contained no recital or clause admitting the patentability of Adkins' invention and no stipulation not to dispute or contest the patentability thereof, Lear, having ascertained that the invention

was not patentable under any of the substantial claims of the application, could refuse to be bound thereby and, upon termination and notice as provided in the license agreement, could defend against Adkins' action for royalties as freely as may a stranger. In such a case, "there is no continuing consideration for the agreement." (*The Armstrong Company v. Shell Company of California,* 98 Cal.App. 769, 779-780.)

The controlling issue here is whether Adkins obtained a patent on the relevant claims of his application which was the subject matter of the license agreement. The record shows that the Patent Office expressly refused to issue a patent on any of those claims even after they had been amended. The patent issued to Adkins in January 1960 based on his new claims filed after the termination of the license agreement was not a part of the subject matter of the license granted by that agreement. Consequently the validity of that patent is not in issue in this action to recover royalties payable as provided in the license agreement. It is thus unnecessary to consider whether the five gyros involved here are covered by the claims of that patent. On that issue Adkins is relegated to an action for infringement.

Unjust Enrichment

Adkins further contends that even though the license and the agreement were terminated by Lear's letter of April 8, 1959, Lear was still liable to him on the theory of an implied contract if it continued to manufacture the four "steel" gyros. This contention is based on *Seagren v. Smith,* 63 Cal.App.2d 733. There the licensee held a license to manufacture certain pumps invented by the licensor on which he had already received

a patent, and no question of infringement or of the patentability of the invention was involved. After the licensee cancelled the agreement the licensor continued to manufacture the same pumps it was theretofore manufacturing under the agreement. The court held that as to the pumps manufactured after the cancellation of the agreement, the licensee was liable to the licensor "upon the theory of implied contract based upon the well-recognized and settled principle that a person shall not be permitted to enrich himself at the expense of another. (17 C.J.S. pp. 322-323.) Clearly, the trial court had jurisdiction of that portion of appellant's cause of action which arose after the cancellation of the agreement, upon the theory of implied contract."

In our opinion, *Seagren v. Smith* is readily distinguishable from the case before us. Here, as we have seen, the license agreement was terminated because the Patent Office had refused to issue a patent on any of the substantial claims of the application. This being so, Lear could not thereafter be held liable to Adkins on the theory of unjust enrichment because it continued to use Adkins' unpatentable invention. (Cf. *The Armstrong Company v. Shell Company of California,* 98 Cal. App. 769.) We agree with Lear that when an article is unpatentable and therefore in the public domain, it may be made and sold by whomever choses to do so, and that as a general rule the inventor cannot recover damages under state law because this would interfere with federal policy as found in the Constitution, Art. 1, sec. 8, ch. 8, and the implementing federal statutes. (*Sears Roebuck & Co. v. Stiffel Co.,* 376 U.S. 225; *Compco Corp. v. Day-Brite Lighting, Inc.,* 376 U.S.

234; *Cable Vision, Inc. v. KUTV, Inc.*, 335 F.2d 348, 351.) While Adkins may be entitled to protection of the invention for which he obtained his patent in an action for infringement, he is not entitled in this action to collect royalties for the use of the invention referred to in the license agreement after a patent on that invention under the claims of his application had been denied by the Patent Office. (*Marvin v. Mills Alloys, Inc.*, 31 Cal.App.2d 549; see also *The Armstrong Company v. Shell Company of California*, 98 Cal.App. 769, 779.)

It appears to us that the case here is to be determined by the rule stated in *Eclipse Bicycle Co. v. Farrow*, 199 U.S. 581, 50 L.Ed. 317, and *Saco-Lowell Shops v. Reynolds*, 141 F.2d 587.

The facts in *Eclipse Bicycle Co. v. Farrow* are strikingly similar to those before us. In that case a bill had been brought upon an agreement to recover royalties. The agreement, so far as pertinent here, recited that Farrow had invented certain improvements pertaining to the mechanism for coasting and braking bicycles, for which he had applied for patents, and that Eclipse Bicycle Co. desired to acquire Farrow's rights "to said inventions as described in the above identified applications, and any letters patent that may be issued thereon," and that Farrow thereby conveyed to the company all his right, title and interest in "the inventions in bicycles, as fully described and claimed in the applications above referred to," and in letters patent that may be issued thereon. The company agreed to pay royalties "on all the devices made or sold embodying the inventions referred to" and to that end to make returns of the number of devices sold. Finally it was covenanted that in case Farrow "for any reason

fails to procure letters patent of the United States for the improvements above referred to, the [company] shall be relieved from the payment of all royalties from and after the date of final adverse action of the Patent Office on the application or applications for patents for said improvements." The bill alleged that soon after the agreement was made, one Morrow, defendant's general manager, applied for a patent on a device in effect the same as Farrow's, that Morrow assigned a half interest therein to the company's president, and that the company began to manufacture and sell the Morrow device. A supplemental bill alleged that upon the sale of Farrow's interest, the company, which had power to do so, failed to prosecute Farrow's applications. As a consequence one of Farrow's applications was abandoned and the other was permitted by the company to lapse. The answer as summarized by the Court admitted the contract, but denied the plaintiff's case, charged him with fraud, and set up that Farrow's invention had been anticipated by another patent, "and that it was impossible to obtain a patent for it, and that, therefore, the defendant was not bound by the contract further."

The Supreme Court held that Farrow could recover on his contract. The real questions in the case, said the Court (199 U.S. at 586-587), are whether the devices involved "fall within the scope of the contract, and these questions depend more upon a careful construction of that instrument than upon nice discriminations between the patents that were or might have been issued. If either of the contrivances used embodies the invention described in Farrow's applications, then the defendant is bound to account for it by the

express terms of its covenant, unless the contract is at an end."

After noting that some of Farrow's claims had been allowed "and there was no such final adverse action of the Patent Office upon either application as a whole as to exonerate the defendant by the terms of which we have recited," the Court continued (199 U.S. at pp. 587-588): "We come back to the construction of the contract. The royalty is to be paid on the 'invention above referred to.' The use of the word 'invention' does not open the state of the prior art and allow the defendant to meet the plaintiff's claim by proving that he had invented nothing new. The royalty is to be paid on the invention described in the specified applications—that is to say, on the contrivances there described—unless and until there is final adverse action by the Patent Office. That is the measure of the defendant's self-protection. It could not have asked or been allowed more. . . . It had all Farrow's interests in its hands, and it took the risk of their worth, except as against what the Patent Office might do. It should be repeated that, so far as the company made any device embodying Farrow's invention, by the fair construction of its express covenant it was bound to account, whether the manufacture was ostensibly Farrow's or not, and he was not left merely to an action for such damages as he could prove."

Saco-Lowell Shops v. Reynolds, 141 F.2d 587, was also an appeal from a decree in a suit to recover royalties under a contract. The contract there licensed the manufacture of "an improved process of cotton roving frame," on which Reynolds as inventor had obtained patents. One question before the court was "whether certain model J roving frames manufactured by de-

fendant are subject to royalties under the licensing contract."

After holding that these frames were properly held by the trial court "to be covered by the patent and hence subject to the payment of royalties under the contract," the court said (141 F.2d at 596): "The liability of the defendant for royalties, however, is to be determined by the terms of the contract, not by technical considerations of patent law. If the J frames which defendant is manufacturing substantially embody the Reynolds invention, defendant is liable for royalties irrespective of the validity of the claims, so long as they have not been held to be invalid, and irrespective of whether or not certain features of the invention may be found in the prior art. Controlling in this aspect of the case is the decision in *Eclipse Bicycle Co. v. Farrow,* 199 U.S. 581, 586-588, 26 S.Ct. 150, 152, 50 L.Ed. 317."

The further comments of the court in *Saco-Lowell Shops* with reference to the confidential relationship between the parties are also pertinent here. "The liability of defendant here is not to be determined as upon a charge of patent infringement nor even as in the case of an ordinary licensee under contract for the payment of royalties, for the reason that the J frames upon which royalties are claimed embody not only the fundamental ideas embodied in the Reynolds invention but also a specific application of those ideas evolved by Reynolds himself and communicated to defendant because of the confidential relationship into which the parties had entered for the development of the invention. In other words, defendant is not an independent manufacturer, nor is it a mere licensee manufacturing

a machine obtained from an independent source. It is a licensee who was working with Reynolds in the joint enterprise of developing his machine for the market, and who brought out a machine based upon his ideas which he conceived and which he communicated in aid of the joint enterprise. There can be no question but that defendant is liable for royalties on the machines embodying Reynolds' idea so communicated, quite irrespective of patent coverage or the terms of the license contract. That there was a confidential relationship existing between defendant and Reynolds when they agreed to work together for the development and marketing of his invention is so clear as not to admit of argument. Cf. *Baker Oil Tools v. Burch,* 10 Cir., 71 F.2d 31, 37."

As to the measure of damages to be awarded in such cases the court said in *Saco-Lowell Shops,* 141 F.2d at 598, that the measure of recovery is to royalty provided in the license agreement.

The law of this state as to the liability of the licensee in such a case is to the same effect. In *Davis v. Kittle Mfg. Co.*, 134 Cal.App. 254, the court said at p. 262: "Appellant next contends that 'plaintiff cannot collect royalties on future inventions.' The rule appears to be otherwise. 'The license may be given before issuance of patent. . . .' (48 C.J., p. 264.) 'The inventor of an unpatented device may make a valid contract for its manufacture, use or sale. It is no objection to the validity of such a contract that any person may manufacture it until a patent is issued. . . . If, therefore, the defendant contracted to pay a royalty before patent was issued, the plaintiff is entitled to recover.' (*Hamilton v. Park McKay Co.,* 112 Mich.

138 [70 N.W. 436], citing numerous authorities.) This contention is without merit."

To sum the matter up, it appears to us that when the Patent Office refused to issue a patent "on the substantial claims of the application" there was an end to Lear's obligation under the license agreement, and that Lear was then well within its rights in terminating both the license and the agreement in its entirety in April 1959. The patent which was finally issued to Adkins in January 1960 was not a patent on the claims of Adkins' application as it stood when the license agreement was executed, or on the claims made by Adkins in September 1957, or on those made in December 1958 which were cancelled by Adkins in March 1959. Consequently the patent was not within the scope of the license and the question of its validity was not before the trial court. As the case stands, however, the termination of the license and the agreement did not relieve Lear of its entire obligation to Adkins.

Under the law as we find it, Lear is still liable to Adkins for royalties due under the license agreement from January 1, 1955, until it came to an end on April 8, 1959. This is in accord with paragraph 3(c) of the license agreement providing that Lear would account to Adkins quarterly on "the net sales prices received on all sales by it of products subject to royalty under the licenses herein granted which are then in effect during each quarter-annual period beginning January 1, 1955."

In view of our conclusions as to the law which must control our decision, it would serve no useful purpose to consider the numerous other points raised and ex-

tensively argued by both Adkins and Lear on their respective appeals relating to the judgment n.o.v.

By its verdict the jury awarded damages in the full amount claimed by Adkins for the period from January 1, 1955 to May 31, 1963. Under the rules discussed above, Adkins was entitled to royalties due to him under the license agreement on all five gyro models for the period during which that agreement was in force, that is, from January 1, 1955 to April 8, 1959, when the license agreement was terminated. There is no evidence sufficiently substantial to sustain the verdict for royalties for the period after April 8, 1959. It follows that in directing a verdict for Adkins as to gyro model 2156 for royalties for the longer period and in denying Lear's motion for judgment n.o.v. with respect thereto, the trial court was in error. Similarly, the court was in error in granting Lear's motion for judgment n.o.v. with respect to the four "steel" gyros, thereby denying all relief to Adkins with respect thereto. Accordingly the judgment n.o.v. must be reversed.

Appeal from Order Granting A New Trial in the Alternative

Concurrent with its determination of Lear's motion for judgment n.o.v., the trial court granted Lear's motion for a new trial on each of four grounds assigned therefor, including "insufficiency of the evidence to justify the verdict, or that it is against law." In its ruling on this motion the court found "specifically that the evidence was insufficient to justify the verdict and that the verdict is against law, and grants a new trial on each of said grounds" and filed its written order accordingly, pursuant to Code Civ. Proc., § 657.

Adkins' first point on appeal from this order is that the trial court erred in holding that the damages awarded by the jury were not the result of passion or prejudice. We find no error in this determination. "To say that a verdict has been influenced by passion and prejudice is but another way of saying that the verdict exceeds any amount justified by the evidence." (*Zibbell v. Southern Pacific Co.*, 160 Cal. 237, 254; *Koyer v. McComber*, 12 Cal.2d 175, 182.) Similarly "[i]n passing upon a motion for a new trial based upon the insufficiency of the evidence, it is the exclusive province of the trial court to judge the credibility of the witnesses, determine the probative force of testimony, and weigh the evidence [citations] . . . It is only where it can be said as a matter of law that there is no substantial evidence to support a contrary judgment that an appellate court will reverse the order of the trial court." (*Brooks v. Metropolitan Life Ins. Co.*, 27 Cal.2d 305, 307.)

The parties are agreed that to the extent Lear is liable to Adkins under the license agreement, the award of damages must be based on paragraph 3 of the agreement. That paragraph provided that royalties would be computed on the net sales prices of Lear's products incorporating one or more of Adkins' inventions, including the price charged for "gyro assemblies" and "gyro systems" as those terms are defined in the agreement. Competent evidence was introduced by Adkins as to the amount of royalties claimed by Adkins under these provisions for the period from January 1, 1955 to May 31, 1963, as claimed by Adkins. It is significant that the computations of Adkins' accountant were based on Lear's answers to cer-

tain interrogatories in which Lear grouped its sales of gyros and of its gyro systems and gyro assemblies, sometimes referred to in the evidence and in the court's instructions as embracing gyro system signals and gyro assembly signals, and that these interrogatories in turn are based on Lear's responses to certain requests for admissions. As to model 2156 the parties stipulated with reference to the amount which would be due for the same period.

As we have pointed out above, the damages awarded by the jury were excessive in that they were not limited to the period from January 1, 1955 to April 8, 1959 when the license agreement was in force. For this reason, if for none other, the trial court was correct in granting the motion for a new trial on the ground that the "damages appearing to have been given under the influence of passion or prejudice" were excessive, and that "the evidence was insufficient to justify the verdict and that the verdict is against law."

Lear's contention that the damages were excessive is based wholly on the testimony of its employee, Vernon Burns. This contention is without merit. Burns' testimony as to what should be included in computing net sales was based on his interpretation of the agreement. In *Ellsworth v. Palmtag,* 168 Cal. 360, 363, it was held that where "questions relating to the contract were framed so that answers would reflect defendant's interpretation of the agreement, rather than the terms thereof, plaintiff's objections should have been sustained." When this part of Burns' testimony is disregarded, the remainder is consistent with the evidence produced by Adkins.

On its motion for a new trial Lear claimed that the court erred in giving certain instructions and in refusing to give certain other instructions; that it erred in refusing to submit well over a hundred special interrogatories to the jury; and that it erred in its rulings with respect to Adkins' use of a certain exhibit to illustrate his testimony and in failing to properly instruct the jury with respect thereto. All these matters related primarily to the question of the validity of the patent and its coverage of Adkins' invention. In view of our conclusion that the patent as issued was not within the scope of the agreement, and that the validity of the patent was not properly in issue before the trial court, there is no need to extend this opinion with a discussion of these matters.

There was no error in the court's refusal to admit in evidence the three agreements executed by Adkins on September 15, 1955, concurrently with the execution of the license agreement, copies of which were attached to Lear's answer. One of these agreements contained a release "to this date" of all claims by Adkins under his agreement of December 1951 including claims arising out of his employment. The documents were offered as being relevant and material to the issue of liability apart from the license agreement and after termination of that agreement. As we have pointed out, Lear is not liable to Adkins apart from the agreement or for any period of time after its termination.

In our opinion the order granting the new trial must be affirmed and the case remanded for a new trial solely on the issue of the royalties to which Adkins may be entitled for the period from January 1, 1955 to April 8, 1959 under the provisions of the license agreement.

Lear's Cross-Appeal from the Judgment

By reason of our conclusions with respect to the necessity for a new trial on the issue of damages only, the issues raised by Lear's appeal from the judgment have become moot, and the appeal should be dismissed.

Appeals re Dismissal of Second Cause of Action

Adkins' second cause of action, in which he repleads the principal allegations of his first cause of action, is for damages for misappropriation of his "idea and invention for precise alignment of gyroscope gimbal bearings utilizing cemented bearing-receiving elements" which he disclosed to Lear in 1952, and for breach of an implied contract and for unjust enrichment. In his trial brief and during the trial he waived all claims under the second cause of action "except for the invention which is the subject matter of Patent 2,919,586, or for the ideas, or discoveries thereof." During the trial Adkins conceded that his second cause of action had been pleaded in the alternative to the first. Accordingly, without requiring him to make an election, the second cause of action was held in abeyance until it could be determined whether "for some reason the contract fails to cover the invention which Mr. Adkins disclosed to Lear." Still later, although no formal ruling appears in the record, the court effectuated a dismissal of the second cause of action insofar as it had not been waived, by refusing to admit evidence in support of the unwaived allegations.

After the judgment n.o.v. had been entered the trial court denied Adkins' request to amend the judgment

"to indicate that the second cause of action was dismissed by the court," stating in the minute order: "Examination of the record reveals that the plaintiff duly waived in open court under the second cause of action: 1. Any and all claims for any ideas, discoveries, or inventions not covered by patent 2,919,586. 2. Any claim for punitive damages. Plaintiff recognized categorically that he was proceeding on one cause of action —an express contract and not an implied contract." In order that it could be determined on appeal from the judgment whether, as a matter of law, Adkins had waived the entire second cause of action, this court, on Adkins' petition for a writ of mandate in Civil No. 28603, held that "the judgment should be amended to show a disposition of the second cause of action." As issued, the writ ordered the trial court to enter an amendment to the judgment in the following terms: "At the outset of the trial, plaintiff John S. Adkins waived all ideas, discoveries and inventions under the second cause of action except for the idea, discovery and invention which is the subject matter of U.S. Patent No. 2,919,586. The Court then required plaintiff to elect between the first and second cause of action, and when plaintiff refused to do so, the Court then dismissed the second cause of action which, after the plaintiff's waiver, remained for the idea, discovery and invention which is the subject matter of U.S. Patent No. 2,919,586, and the same is hereby dismissed." The trial court complied with this mandate on December 30, 1964.

It is Adkins' position on this appeal that, unless the judgment n.o.v. and the order granting a new trial are reversed (in which event he will have recovered on

his primary cause of action), the judgment of dismissal must be reversed and remanded for trial on his second cause of action.

The amendment to the judgment of December 30, 1964, was not erroneous. Adkins' waivers effectively limited his second cause of action to a claim for damages for unjust enrichment by reason of Lear's alleged misappropriation of "the invention which is the subject matter of Patent 2,919,586, or for the ideas, or discoveries thereof." With respect to that invention Adkins' rights are measured exclusively by the patent and by the federal patent laws. To permit Adkins to claim protection of that invention under the common law or any law of this state would be to "give protection of a kind that clashes with the objective of the Federal patent laws." (*Sears, Roebuck & Co. v. Stiffel Co.*, 376 U.S. 225; *Compco Corp. v. Day-Brite Lighting Inc.*, 376 U.S. 234.) It should also be noted that when, as here, a plaintiff relies upon a valid express contract his recovery must rest upon and be measured by its terms, and cannot recover upon the theory of an implied contract. (*Thacker v. American Foundry*, 78 Cal.App.2d 76; *Lemoge Electric v. County of San Mateo*, 46 Cal.2d 659.)

That part of the judgment as amended December 30, 1964, dismissing Adkins' second cause of action must be affirmed.

Adkins' Appeal from
Order Apportioning Costs

Adkins has appealed from an order made January 24, 1964, apportioning the costs of an audit of Lear's books (Civ. No. 29770).

The audit involved here was ordered by the court as an aid to Adkins' discovery proceedings designed to ascertain the number of sales of gyros, gyro assemblies and gyro systems manufactured and sold by Lear from January 1, 1955, to the date of Lear's answers to Adkins' interrogatories and the net sales price received by Lear. Lear's first answers to the interrogatories were filed in July 1963. The record reflects extended proceedings before the court, initiated in the main by Adkins, to compel Lear to furnish further information. These proceedings terminated in an order on September 20, 1963, for the audit which was modified after further proceedings on October 18. Under this order the court reserved the power to apportion the costs of the audit. After the audit was completed and further answers to Adkins' interrogatories had been filed the auditors submitted their bill for $17,880. After further hearings the Court on January 24, 1964, made the order appealed from, ordering Adkins to pay 45% of the cost of the audit, and Lear to pay 55%.

On appeal Adkins claims that in apportioning these costs the trial court "abused its discretion, requiring a total reversal of its order." Lear says in reply that there was no abuse of discretion and that, in any event, the order is not appealable.

"The better view is that an order made for the purpose of furthering discovery proceedings, or granting sanctions for refusal to make discovery, is not appealable (*Huenergardt v. Huenergardt,* 218 Cal.App.2d 455, [32 Cal.Rptr. 714]; *Farnham v. Superior Court,* 188 Cal.App.2d 451, 455 [10 Cal.Rptr. 615])." (*Lund v. Superior Court,* 61 Cal.2d 698, 709.)

The appeal from the order apportioning costs of the audit must be dismissed.

In Civ. No. 28624, the judgment non obstante verdicto entered July 15, 1964, is reversed. That part of the minute order of July 2, 1964, granting defendant's motion for judgment n.o.v. with respect to the four "steel" gyros is not appealable, and the appeal therefrom is dismissed. The order of July 2, 1964, denying defendant's motion for judgment n.o.v. with respect to the model 2156 gyro is reversed. The order of July 2, 1964, granting defendant's motion for a new trial is affirmed. The appeal from the judgment entered May 4, 1964, is dismissed.

In Civ. Nos. 30052 and 30089, the judgment as amended December 30, 1964, dismissing plaintiff's second cause of action is affirmed.

In Civ. No. 29770, the appeal from order of January 24, 1964, apportioning the costs of an audit is dismissed.

The case is remanded to the trial court for a new trial solely on the issue of the damages to which plaintiff is entitled under the license agreement for the period from January 1, 1955 to April 8, 1959.

In Civ. No. 28624, Adkins shall recover all his costs on his appeal from the judgment notwithstanding the verdict and on Lear's appeals from the order denying in part its motion for a judgment notwithstanding the verdict and from the whole of the judgment entered May 4, 1964.

In Civ. No. 30052, Lear shall recover its costs on appeal.

In Civ. No. 30089, Adkins shall recover his costs on appeal.

In Civ. Nos. 29770 and 30052 Lear shall recover its costs on appeal.

McCoy, *J.**

We concur.

Roth, *P. J.*

Herndon, *J.*

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*Sitting pro tempore under assignment by the Chairman of the Judicial Council.

Modification of Opinion.

In the District Court of Appeal of the State of California, Second Appellate District, Division Two.

John S. Adkins, Plaintiff, Appellant and Cross-Respondent, vs. Lear, Incorporated, Defendant, Respondent and Cross-Appellant. Civ. Nos. 28624, 29770, 30052, 30089.

Filed Sept. 2, 1966.

THE COURT.

The opinion of the court filed August 8, 1966, is modified by deleting therefrom that part beginning in the second line from the bottom of page 23 of the ditto copy with the words "When, as here, the license agreement . . ." to and including the 9th line at the top of page 24, and inserting the following language in lieu thereof:

> "When Lear terminated the license and the license agreement by its letter of April 8, 1959, the license with respect to Exhibit 'B' was non-exclusive by virtue of the provisions of paragraph 11 of the license agreement, Adkins having terminated his employment by Lear in January 1958."

The petitions for rehearing are denied.

Pages 42-46 of John S. Adkins' "Petition for Hearing" in the California Supreme Court.

[42]

ties and its attempt to terminate the license agreement on April 8, 1959 was only a breach of contract which did not terminate the license agreement.

B. Lear Could Not Exercise Paragraph 2(a) Termination Without Prior or Concurrent Cessation of Manufacture of Gyros Embodying Adkins' Invention.

As indicated *supra*, the District Court of Appeal did not consider at all whether the license agreement was terminated by Lear's letter of April 8, 1959 under paragraph 2(a). That paragraph states, in the last sentence, that "Lear shall have the right, on 90 days' prior written notice, to terminate any one or more of the licenses herein granted," but is silent on Lear's right to manufacture after termination and also silent on Lear's obligation for royalties if it does so.

The obvious purpose of the paragraph 2(a) termination clause was to permit Lear to terminate annual minimum royalty payments required by paragraph 3(g) if Lear ceased manufacturing gyros using Adkins' invention. Under paragraph 3(g) Lear was obligated to pay Adkins minimum royalties of $1,500.00 a year for 16 years (i.e., $24,000.00), even if it ceased manufacture of gyros containing Adkins' invention, as long as the license was in effect. Paragraph 3(g) expressly states that minimum annual royalties are to be paid "provided the licenses are *in force and effect*," but paragraph 3(g) does not contain any provision for Lear to terminate their force or effect if Lear ceased manufacturing gyros using Adkins' invention. Obviously the "force and effect" phrase is a reference to paragraph 2(a), which contains Lear's only right to terminate the license (not the agreement) which is not expressly tied to the hap-

[43]

pening of a condition.[10] Thus, paragraphs 2(a) and 3(g) must be read together to mean that if Lear ceases manufacturing gyros utilizing Adkins' invention, it may then terminate annual minimum royalties required by paragraph 3(g) by exercising paragraph 2(a) termination.

Furthermore, in the absence of any duty to manufacture, which is expressly stated in paragraph 3(g), the 90-day period of paragraph 2(a) can only be for Lear's benefit, and must mean that like the 90-day period provided in paragraph 3(g) if Adkins terminates, Lear has 90 days in which to complete and sell gyros containing Adkins' invention then in the process of being manufactured. Any other construction renders the 90-day period totally meaningless. Thus, the 90-day clause of paragraph 2(a) is still another indication that paragraph 2(a) termination by Lear requires prior or concurrent cessation of manufacture of gyros containing Adkins' invention.

Civil Code Section 1643 states that "a contract must receive such an interpretation as will make it lawful, operative, definitive, reasonable and capable of being carried into effect, if it can be done without violating the intention of the parties." Civil Code Section 1638 states that the language of a contract is to govern its interpretation if that language is clear, explicit and does not involve an absurdity, *Kohn v. Kohn* (1950), 95 Cal. App. 2d 708. It would be absurd to assume that Adkins was exchanging his right to a "mutually satisfactory royalty" under the first agreement of December 29, 1951 for $500.00 upon execution of the license agree-

[10]Paragraph 6, the only other termination clause, is expressly tied to either issuance of claims which are not substantial claims or an adjudication that the patent is invalid.

[44]

ment, which would be the only certain consideration if, in conjunction with the right not to manufacture at all, Lear also had the right to terminate under paragraph 2(a) and continue to manufacture and sell gyros embodying Adkins' invention royalty-free. This conclusion is reinforced by paragraph 6 which gives Lear the right to manufacture without further payment of royalties only in the event the Patent Office refuses to issue a patent on the invention disclosed containing substantial claims, or in the event the patent is held invalid. Thus, since Lear's only right to manufacture royalty-free is expressly stated in paragraph 6, it is not to be read into paragraph 2(a), *County of Alameda v. Southern Pacific Co.* (1961), 55 Cal. 2d 479. Rather, paragraph 2(a) should be interpreted in accordance with the reasonable intention of the parties that in the event Lear ceased manufacturing gyros using Adkins' invention, it should thereafter be able to avoid the payment of minimum annual royalties.

In addition, paragraph 6 would be wholly redundant if Lear could terminate for any reason and at any time under paragraph 2(a) and thereby avoid further royalty payments. Similarly, paragraph 11 would be wholly redundant if Lear could terminate at any time and for any reason and thereby avoid further royalty payments. Under paragraph 11, Lear received four options upon Adkins' leaving Lear's employ, three of which required payment of increased minimum royalties and one of which required only payment of paragraph 3(g) minimum royalties and actual earned royalties. If Lear could terminate under paragraph 2(a) for no reason at all and pay no further royalties at all, this would constitute a fifth option, thus making paragraph 11 wholly redundant.

[45]

A further argument also supports Adkins' construction of paragraph 2(a). Under paragraph 3(g) Adkins could terminate Lear's right to manufacture gyros using Adkins' invention if Lear was in breach by failing to make minimum royalty payments. Under paragraph 10 Adkins could terminate the license agreement if Lear failed to pay earned royalties. Like paragraph 2, paragraph 10 is also silent on the subject of further manufacture after termination, and is also silent on Lear's obligation to pay royalties if it continued to manufacture gyros containing Adkins' invention after a paragraph 10 termination by Adkins. It would be absurd to say that Adkins could prevent further manufacture only if Lear failed to pay minimum royalties and not if Lear failed to pay earned royalties, and equally absurd to say that if Lear continued manufacture after paragraph 10 termination, it would not be liable for earned royalties. Rather, it is obvious that the parties so clearly understood that Lear's right to manufacture gyros using Adkins' invention would end upon termination in both the paragraph 2(a) and paragraph 10 situations, and that Lear would be liable for earned royalties if it thereafter continued manufacture, that they did not find it necessary to so state in those paragraphs, but stated it only in paragraph 3(g) for failure to pay minimum royalties where there might be some question.

Even apart from the foregoing construction arguments, paragraph 2(a) could not be read to permit Lear to terminate at any time and for no reason at all and thereafter continue to manufacture gyros using Adkins' invention royalty-free. Civil Code Sections 1655 and 1656 require that stipulations which are necessary to make a contract reasonable be implied therein, *Brawley v. Crosby Research Foundation* (1946), 73 Cal. App.

[46]

2d 103. Any interpretation which would permit Lear to terminate under paragraph 2(a) at any time and for no reason and continue to manufacture gyros utilizing Adkins' invention royalty-free would be the most unreasonable construction that could be placed on the license agreement, as it is obvious that the intent of the parties was that Lear was to pay royalties to Adkins as long as it manufactured gyros containing his invention, subject only to its right to terminate under paragraph 6 if no substantial claims issued. Thus, implying in paragraph 2(a) the stipulation of prior or concurrent cessation of manufacture before exercise of the termination right stated therein makes the contract reasonable and accords with the parties' actual intent as garnered from the other provisions of the license agreement.

Finally, it should not be forgotten that Lear alone drafted the license agreement [Rep. Tr. p. 2500, lines 2-5] and caused the uncertainty in paragraph 2(a), if any, to exist, and which must, therefore, be resolved in Adkins' favor, Civil Code §1654; *Hunt v. United Bank and Trust Co.* (1930), 210 Cal. 108.

Thus, since Lear manufactured gyros containing Adkins' invention before April 8, 1959 and continued to do so after that date, Lear never had the right to effect and therefore never effected a paragraph 2(a) termination of the license agreement, and its letter of that date was only a breach of contract which did not terminate the license agreement.

Opinion of California Supreme Court.

In the Supreme Court of the State of California, in Bank.

John S. Adkins, Plaintiff and Appellant, v. Lear, Incorporated, Defendant and Appellant. L.A. 29204, 29205, 29206, 29207 (Consolidated Appeals).

Filed, Dec. 14, 1967.

John S. Adkins, an inventor and mechanical engineer, was engaged in the development and improvement of gyroscopes[1] for Lear, Incorporated, a manufacturer of gyroscopes and related mechanisms. Adkins brought this action against Lear, alleging in his first cause of action that prior to 1955 he had conceived certain inventions and made them available to Lear and that on September 15, 1955, he entered into a written agreement with Lear under the terms of which he granted Lear a license to use these inventions in products manufactured by it, in exchange for which Lear was to pay a stated percentage of the net sales price to Adkins as royalties on all products incorporating his inventions. It was averred that from September 10, 1957 onward, Lear had refused to pay royalties to Adkins on numerous products which it manufactured and sold and for which royalties were required to be paid under the license agreement.

The jury found in favor of Adkins and awarded him damages in the amount of $904,474.49 for the period from January 1, 1955, to May 31, 1963.[2] A portion of this amount ($16,351.93) was based on a verdict

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[1]Hereinafter sometimes referred to as gyros.

[2]The parties stipulated that this was the period of time involved for the purpose of determining the amount of damages.

directed by the trial court as to a product manufactured by Lear and designated as the 2156 gyro. A judgment on the jury's verdict was entered on May 4, 1964. Thereafter, Lear moved for judgment notwithstanding the verdict or, in the alternative, a new trial. (Code Civ. Proc., § 629.)[3] The trial court granted the motion for judgment notwithstanding the verdict, except as to the 2156 gyro, and it granted the motion for a new trial in the alternative as to all products involved in the action. Multiple appeals have been taken; that which involves the primary matters at issue between the parties, numbered L.A. 29204, will be discussed first[4]

L.A. 29204

The license agreement contained two provisions permitting its termination by Lear, and Lear purported to exercise its right to terminate under these provisions by a letter addressed to Adkins dated April 8, 1959. Reduced to its simplest terms, the fundamental questions we are called upon to decide are whether the agreement was validly terminated by Lear and (except as to the

[3]The alternative form of motion was abolished by amendment of section 629 before the trial of the present case commenced in 1964. (Stats. 1961, ch. 604, p. 1752.) However, the provisions of the section with respect to the review of judgments notwithstanding the verdict and orders for a new trial remained substantially the same, with the exception that the denial of a motion for judgment notwithstanding the verdict was made reviewable on appeal as a matter of right where the motion for a new trial was granted.

[4]This discussion involves: (1) Adkins' appeal from the judgment notwithstanding the verdict insofar as it was favorable to Lear and from the order granting the motion for a new trial; (2) Lear's appeal from the judgment on the directed verdict as to the 2156 gyro and from the court's denial of its motion for judgment notwithstanding the verdict as to that product; and (3) Lear's appeal from the whole of the judgment entered on May 4, 1964, on the jury's verdict in favor of Adkins.

2156 gyro) whether there is substantial evidence in support of Lear's claim that its products did not incorporate Adkins' invention. We determine that under a proper construction of the agreement Lear did not effect a valid termination and that not only is there no substantial evidence to support a determination that Lear did not use Adkins' invention in its products but that the record compels the conclusion that Lear did incorporate Adkins' invention in the instruments manufactured by it. The 2156 gyro will be discussed separately.

Before setting forth the facts, it may be helpful to summarize some fundamental principles and procedures relating to the instant case. The federal courts have exclusive jurisdiction over actions arising under patent laws (28 U.S.C.A. § 1338) but where a plaintiff seeks to enforce a patent licensing agreement the action "is not a suit under the patent laws of the United States and cannot be maintained in a federal court as such." (Luckett v. Delpark (1926) 270 U.S. 496, 502, 510; Farmland Irrigation Co. v. Dopplmaier (1957) 48 Cal.2d 208, 217.)[5] Where such an action arises in a state court, the court may pass upon the meaning, scope, validity or infringement of the patent. (Lear, Siegler, Inc. v. Adkins (9th Cir. 1964) 330 F.2d 595, 600.)

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[5]After the present suit was filed by Adkins but before the trial was held, Lear filed an action for declaratory relief in the United States District Court for the Southern District of California, alleging that Adkins' patent was invalid and that in any event the gyros manufactured by it did not infringe the patent. The federal court granted a stay until final adjudication of the present action. (Lear Siegler, Inc. v. Adkins (9th Cir. 1964) 330 F.2d 595.)

A patent is, of course, presumed to be valid until the presumption has been overcome by convincing evidence.[6] Ordinarily, a party will attempt to demonstrate the invalidity of a patent by showing that it has been anticipated by the prior art or that it is obvious or without utility. However, one of the oldest doctrines in the field of patent law establishes that so long as a licensee is operating under a license agreement he is estopped to deny the validity of his licensor's patent in a suit for royalties under the agreement. The theory underlying this doctrine is that a licensee should not be permitted to enjoy the benefit afforded by the agreement while simultaneously urging that the patent which forms the basis of the agreement is void. (See 4 Walker on Patents (Deller 2d ed. 1965) p. 607.) This doctrine does not prevent one who is not a licensee from challenging the patent's validity.

The license agreement in the present case was, insofar as is relevant here, based not on an existing patent issued to Adkins but on his application for a patent which the parties believed would eventuate in the issuance of a patent.

A patent application generally consists of a drawing of the invention, the specifications, and the claims.[7] The specifications are a description of the invention, the manner in which it is constructed, and the objects it is intended to achieve. They ordinarily include an introductory clause identifying the field in which the invention is made, a recitation of the advantages of the in-

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[6]The principles of patent law summarized here may, unless otherwise noted, be found in Toulmin, Handbook of Patents (2d ed. 1954) chs. III, IV, V.

[7]There are additional formal requirements such as the oath of the inventor; a drawing is not required in every case.

vention and the state of the prior art, a brief description of the drawings and its parts, and, in the case of a machine, the manner in which it operates.

The claims follow the specifications. The claims must point out the subject matter which the applicant regards as his invention, and they are "the real measure of the invention." The drafting of claims is a highly specialized and difficult undertaking. The practice is to include both very broad claims and claims of a more restricted type. Frequently, an applicant will state his claims as broadly as is feasible in order to obtain as wide a monopoly as he can, gradually narrowing them to precisely describe his invention as the broader claims are rejected. (See 2 Walker on Patents (Deller ed. 1937) p. 770.) The subject matter of the claims may describe a machine or apparatus designed to perform some function, sometimes called an "apparatus claim," or a method or process of achieving a particular result independent of the machine which produces it, sometimes called a "method claim."

The prosecution of the application before the United States Patent Office will, except in very unusual cases, consist of at least one rejection of some or all of the claims of the application on the ground that a search has indicated they have been anticipated by prior inventions, and the subsequent amendment of the claims or specifications by the inventor. (See Seidel, What the General Practitioner Should Know About Patent Law and Practice (1956) A.L.I. p. 60.) He may then file an amendment which will alter the prior claims, cancel them, or add new claims. However, he may not enlarge the disclosure of the application as initially filed by adding new matter in an amendment. (35 U.S.C.A. §132.)

The issuance of a patent necessarily means that the Patent Office did not consider the amendment to constitute new matter in violation of the patent laws, and its determination in this regard is entitled to special weight. (Helm Products v. Lake Shore Manufacturing Co. (7th Cir. 1955) 227 F.2d 677, 679.) The process of rejection and amendment continues until either allowance or final rejection of the claims. A rejection is presumably designated as final if the examiner concludes that there is little likelihood that the application can be amended in such a manner that the issuance of a patent would be justified. This procedure of rejection and amendment is so commonplace that one authority has stated that most patent attorneys view with some misgivings those rare instances in which an application is allowed without amendment because it raises the possibility that the applicant has failed to state his claims as broadly as he could have and that a still broader claim might have been allowed, defining the invention (and thus the protection afforded by the patent) in a manner broader and more advantageous to the applicant. (Seidel, *op. cit.* supra, p. 48.)

An application may not claim more than one distinct invention, and a patent may be issued for one invention only. If the examiner at the Patent Office discovers that more than one invention is disclosed by an application he will require a "division," i.e., the applicant must limit his claims in the application to only one of the inventions but may file a separate application for each of the other inventions disclosed by the original application. It also happens that, after filing an application, the inventor may discover improvements which involve additional subject matter over the original disclosure

and which cannot be added by amendment because they constitute new matter. He may then file another application, called a "continuation application" in which he may claim both the disclosure of the original application and the new improvements.

If the applicant is satisfied with the claims which have been allowed he may cancel those which have been finally rejected. If he is dissatisfied with the final rejection he may take an appeal to the Board of Appeals, or, in certain limited circumstances, may attempt another amendment. (37 C.F.R. § 1.116.) At the time of the prosecution of the application involved in the present case, the average patent application had a pendency of somewhat over three years and was acted upon by the Patent Office from two to four times. (Seidel, *op.cit.* supra, p. 61.)

On December 29, 1951, Adkins and Lear entered into an agreement providing that Adkins would supervise the fabrication of vertical gyroscopes for Lear, that all new discoveries, ideas and inventions relating to such gyroscopes would become the property of Adkins, and that he would license Lear to manufacture the instruments on a mutually satisfactory royalty basis. The agreement also provided that the physical instruments fabricated would be the property of Lear.[8] A few days later, Adkins commenced employment with Lear in its Santa Monica plant and began to conduct various experiments aimed at improving the accuracy and lowering the cost of manufacturing these instruments.

Gyroscopes are used in aircraft to indicate to the pilot the direction and attitude of the airplane. A vertical

[8]The 1951 agreement was attached to and made a part of the complaint.

gyro indicates the pitch and roll of the aircraft and a directional gyro indicates the aircraft's direction. The gyro seeks to maintain its fixed position in space, and the movements of the aircraft are measured electronically by the gyro and recorded on gauges. The essential, unique element of a gyro is a rotor, a heavy disc, which, when it is electrically driven at high speed, seeks to maintain its attitude in space.

In all cases the rotor is suspended by its axis, the ends of which are mounted in a ring, known as a gimbal. On some occasions the gimbal ring is itself suspended in a second ring, in which event the rings are known as the inner and outer gimbal rings and axes. The entire structure is mounted through the outer gimbal ring in a frame fixed to the aircraft or other craft served by the gyro. Each gimbal ring is provided with two short pins or axle ends called trunnions, which project outward from the circumference of the ring directly opposite each other. They lie on a common axis and are inserted into a bearing element which, in the case of the inner gimbal, is fixed to the inner circumference of the outer gimbal ring and, in the case of the outer gimbal, to a supporting frame. There is, accordingly, one pair of bearings in the outer gimbal for the inner gimbal, and one pair of bearings in the frame for the outer gimbal. The bearings are of the ball-bearing type, each consisting of an inner and outer race or ring with a number of balls between the two rings.

Among the most important factors in achieving accuracy in a gyro is alignment on the same axis of the pair of trunnions on the opposite sides of the gimbal, and the alignment in parallel planes of the faces of the

bearing elements. Accuracy in these coaxial and parallel alignments reduces friction and the exertion of undesirable forces which cause the gyro rotor to drift from its desired stable position in space, which in turn results in inaccurate recordations. In all gyros here in issue, the bearings are fixed in place, either directly to the next outer gimbal or frame, or to intermediate bearing cups affixed to the outer gimbal or frame.

Adkins' invention and the original claims related thereto involved both a mechanism or apparatus which fixed and held each pair of bearings in coaxial and parallel alignment, as explained above, and a method by which pairs of bearings could be positioned in coaxial and parallel alignment. In subsequent amendments the method claims were eliminated. When Adkins was first employed by Lear its practice was to bore, tap and ream a pair of coaxial holes directly opposite each other on the gimbal ring or frame which supports the outer ring. The bearings were then fitted into the seats formed by these holes. In order that alignment within acceptable tolerances could be achieved by this method, precision work by skilled machinists was required and there was a high incidence of rejects.

Adkins' apparatus for alignment, in its simplest form, consists of a pair of bearing cups mounted in oppositely placed receiving holes in the gimbal by use of a mandrel. A mandrel, in this instance, is a finely tooled rod or shaft, and is used by Adkins only as an assembly tool. Its cylindrical circumference is such that a bearing cup will fit snugly over each end of the mandrel. The mandrel, with cups firmly in place, is then inserted within the gimbal. In this instance the gimbal is not a ring but a hollow sphere which is made

in two halves, capable of being joined to form the sphere. There is a receiving hole, designed to receive a bearing cup at the bell top of each half sphere. The mandrel, with cups fitted, is first inserted within a half sphere by placing a cupped end of the mandrel into the receiving hole. The other half sphere is then placed over the assembly, so that the opposite cupped end of the mandrel fits into the receving hole in that half sphere. The mandrel is of such length that when the half spheres are joined the cups project into the receiving holes. These holes are oversize, that is, the cups do not fit snugly into the holes but are allowed to freely position themselves. When the gimbal sphere is in the assembled position, the cups are cemented into the precise position as aligned by the mandrel. As the mandrel is machined to the precise dimensions of the rotor shaft or trunnions of the inner gimbal, as the case may be, the cups will receive the shaft or trunnions in what Adkins claims to be greatly improved alignment. Moreover, aside from the mandrel, which is a reusable tool, and the inner surfaces of the cups which are machined to receive the pair of bearings, no precision machine work is required and production costs are thus substantially reduced. After the cups have been firmly fixed in place, the sphere is disassembled, the mandrel removed, the rotor or inner gimbal is installed, and the sphere reassembled.

At the same time that Adkins was engaged in developing his invention, Lear was experimenting in its Grand Rapids, Michigan, plant with a number of other devices to achieve gyro accuracy. Lear claims that it developed the devices used in its models 2151, 2152, 2153 and 2171 independently of Adkins and that these

models do not incorporate any of Adkins' inventions. Adkins disagrees. These models will hereafter be collectively referred to as the "steel gyros"[9] and will be discussed more fully in the portion of this opinion devoted to the question whether Lear utilized Adkins' invention in its products.

On February 24, 1954, Adkins filed an application for a patent in the United States Patent Office relating to his invention. It contained, *inter alia,* several claims relating to bearing alignment. Claims 7 and 8 related to a *method* of aligning bearings, and Claim 9 was denominated an alignable bearing structure for supporting an element movable with respect to another element. These claims were rejected by the Patent Office on September 8, 1954, as being fully met by a previous patent issued to one Carlson. Thereafter, on March 7, 1955, Adkins filed Amendment A to his application. This amendment canceled Claims 7 and 8 and replaced them with Claims 18 and 19, which also related to a method of bearing alignment. Three words were added to Claim 9.

This was the condition of the application when the license agreement was executed on September 15, 1955. Several years of negotiation preceded the consummation of this agreement, and the parties were represented by counsel in these negotiations.

The license agreement expressly provided that it superseded and canceled all prior agreements between

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[9]The parties disagree as to the correct terminology applicable to this group of products. Lear claims they should have been designated as "Michigan gyros" because they were developed by it at the Michigan plant. Since the agreement refers to these models as steel gyros and this appears to be the more neutral term, we shall adopt this designation.

the parties, including the one executed on December 29, 1951. Adkins represented in the agreement that he was the owner of the inventions disclosed or intended to be disclosed in the application, which was attached and referred to as Exhibit B. He granted to Lear an exclusive license "under all the claims of . . . Exhibit 'B' . . . and any patents issued . . . thereon." The definition of the word "claims" was limited to those claims which were patented or patentable. Consideration in the amount of $500 was acknowledged, and it was provided further that while the licenses were in effect a state royalty would be paid on products incorporating Adkins' inventions and that, in any event, a minimum of $500 a year would be payable as royalties.[10]

Two provisions permitted Lear to terminate the agreement. One was contained in paragraph 2(a) and provided: "Lear shall have the right on ninety days' prior written notice to Adkins, to terminate any one or more of the licenses herein granted." The other, set forth in paragraph 6 of the agreement, stated, "In the event that . . . the U. S. Patent Office refuses to issue a patent on the substantial claims of the application attached as Exhibit 'B', or if such a patent so issued is subsequently held invalid . . . Lear at its option shall have the right forthwith to terminate the specific license so affected or to terminate this entire Agreement and no further royalties shall thereupon be payable under the license so terminated or under this Agreement if Lear shall have elected to terminate this Agreement in its entirety."

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[10]The agreement also provided that Lear would reimburse Adkins for $540 in patent costs already incurred by him and would pay future costs for the prosecution of the application.

On March 21, 1957, the Patent Office rejected Claims 9, 18 and 19 on the ground that they had been fully met by a patent granted to one Grenat. Before Adkins filed any amendment in an attempt to meet this objection, Lear wrote him on September 10, 1957, that it had reviewed his patent application and concluded it did not disclose any inventions utilized in any Lear equipment except the 2156 gyro and certain components thereof, that the steel gyros manufactured by it did not come within the scope of the application, and that Lear had made a search of the Patent Office files and believed the method of bearing alignment used in assembling the steel gyros was not patentable. Lear also informed Adkins that it would no longer pay royalties on the steel gyros but would continue to do so on the 2156 gyro. Adkins protested this action and on February 1, 1957, he resigned from Lear's employ because of its refusal to continue the payment of royalties on the steel gyros.

Thereafter, Adkins again amended Claims 9, 18 and 19 in an attempt to meet the objections of the Patent Office relating to the Grenat patent. These claims were also disallowed and, after another amendment of the application but before any action by the Patent Office on the amendment, Lear wrote Adkins on April 8, 1959, that it was exercising its right to terminate the license agreement under paragraphs 2(a) and 6. Royalty payments on the 2156 gyro were also discontinued. Subsequently, Adkins canceled the claims in his application going to a *method* of aligning bearings and substituted therefor a series of claims referring to an *ap-*

paratus for support bearings.[11] These apparatus claims were allowed by the Patent Office and letters patent issued thereon on January 5, 1960. On the same date, Adkins filed the present action. Lear stipulated that it manufactured and sold the gyros in issue both before and after its letter of termination of April 8, 1959.

In summary, a history of the prosecution of Adkins' patent application, after the license agreement was executed, reveals that Lear refused to pay royalties on the steel gyros after one rejection of Adkins' claims by the Patent Office, and it notified Adkins that the agreement was terminated after a second rejection at a time when the claims still involved a method of aligning bearings.

The trial of the action occupied many weeks, and voluminous testimony was introduced by both parties. The trial court held that as a matter of law Lear had terminated the license agreement insofar as the steel

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[11]The history of the prosecution of the patent application shows the following: On September 23, 1957, Adkins filed Amendment B, amending Claims 9, 18 and 19, but only in minor respects, for the purpose of avoiding the bar of the Grenat patent. In a supplemental amendment before Patent Office action (Amendment C), he added Claims 22 through 27, which related to an alignable bearing structure. These claims were rejected on June 20, 1958, the first group as still not meeting the objections relating to the Grenat patent and the second as being anticipated by a patent to Sperry. On December 22, 1958, Adkins filed Amendment D, this time adding some material to the specifications, amending Claim 9, and substituting for Claims 18 and 19, claims 27 and 28, the latter two claims still relating to a method for aligning bearings. The April 8, 1959, letter of termination was sent prior to any action by the Patent Office on this amendment. A few weeks later Adkins canceled the method claims and by Amendment E substituted the apparatus claims on which he was finally granted a patent.

gyros were concerned,[12] Adkins had urged at the trial that even if the agreement was terminated Lear would be liable for damages under the theory of unjust enrichment set forth in Seagren v. Smith (1944) 63 Cal.App.2d 733.[13] The court submitted to the jury for determination whether, as to the steel gyros, Adkins' patent was valid and whether Lear used the invention. The jury deliberated for eight days, and its verdict in favor of Adkins implied that it had determined both that the patent was valid and that Lear had utilized Adkins' invention in its products. Lear's motion for judgment notwithstanding the verdict and for a new trial in the alternative was based on numerous grounds, including the asserted invalidity of the patent and noncoverage.

The trial court, in granting the motion for judgment notwithstanding the verdict as to the steel gyros, wrote

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[12]Lear insists that Adkins conceded at the trial that the license agreement had been terminated as a matter of law. There is no merit in this contention. Lear relies on certain statements made by Adkins' attorney to the trial court in chambers and on the fact that Adkins submitted an instruction, given by the trial court, stating that Lear had terminated the agreement by its letter of April 8, 1959. However, a reading of the record indicates that Adkins took the position early in the trial that the April 8 letter did not effect a valid termination and that it was only after the trial court had ruled as a matter of law that the agreement had been terminated that Adkins, in discussions with the trial judge, assumed this to be the case. The instruction stating that the agreement had been terminated was proposed by Adkins only as an alternative in the event the court refused to give another instruction requested by him stating that the letter of April 8, 1959, was wholly ineffective to terminate the agreement.

[13]In the *Seagren* case it was held that although a licensing agreement was canceled by the licensee, the latter was nevertheless liable for the payment of royalties thereafter upon the theory of an implied contract, based on the principle that a person shall not be permitted to enrich himself unjustly at the expense of another.

an opinion in which it held that Adkins' patent was invalid as a matter of law. The court analyzed Adkins' invention and the steel gyros manufactured by Lear and compared them with the prior art. The holding of invalidity was based on the ground that Adkins' device did not constitute an invention but was merely an aggregation of old parts and elements performing no new or different function. Although the court purported to do so, it did not decide whether Lear utilized Adkins' device.[14] The motion for new trial was granted on the grounds of irregularity of the proceedings, excessive damages, errors of law occurring at the trial, insufficiency of the evidence to justify the verdict, and that it was against the law. (See Code Civ. Proc., § 657.)

Under the doctrine of licensee estoppel, Lear would be prohibited from challenging the validity of Adkins' patent if the agreement had not been validly terminated. Where a license agreement specifies the conditions under which termination may occur, those conditions must be satisfied in order to effect a valid termination. (Thomson Spot Welder Co. v. Oldberg Mfg. Co. (Mich. 1932) 240 N.W. 93, 94; see Ellis, Patent Licenses (3d ed. 1958) pp. 365-366; 69 C.J.S. p. 785.) Here, the contract provided that it would continue in force until the patent relating to the subject matter of the agreement expired, unless sooner terminated pur-

[14]After holding Adkins patent invalid the court stated that it was desirable to dispose of the question of infringement by Lear. However, the opinion merely states that the device utilized by *Lear* in its steel gyros was not patentable and, therefore, that Adkins could not claim it as infringing his patent.

suant to its provisions.[15] We must, therefore, turn our attention to the question whether Lear effected a termination of the license agreement.

We will consider first the question whether Lear validly terminated the agreement under paragraph 6.

As we have seen, paragraph 6 provided that Lear could terminate the agreement in the event the Patent Office refused to issue a patent on the substantial claims of the application (Exhibit B).[16] The crux of Lear's argument is that Adkins was required to obtain a valid patent based on method claims and that the agreement related only to those claims set forth in the application at the time the contract was entered into, or their substantial equivalents. Lear also contends that section 6 did not require final action by the Patent Office in rejecting Adkins' application before the right to terminate arose and that it was justified in terminating the agreement on April 8, 1959, because the Patent

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[15]Lear relies on authorities holding that a licensee may terminate a license agreement upon notice to his licensor even though, prior to termination, there has been no adjudication of invalidity of the patent which is the subject of the agreement and that thereafter the licensee may challenge the validity of the patent. (See, e.g., The Armstrong Co. v. Shell Co. of Cal. (1929) 98 Cal.App. 769, 778-779.) This rule has no application if the agreement sets forth the particular circumstances under which termination must occur. As stated above, such provisions must be complied with in order to effect a valid cancellation.

[16]This provision also permitted Lear to terminate the agreement under certain conditions subsequent to the issuance of a patent. Thus Lear was given the power to cancel the agreement if a patent which issued on the claims of the application was subsequently held invalid. Obviously, any power of termination Lear may have had under such a provision could not be exercised until after the issuance of the patent. It may be noted in this connection that it has been held under a similar provision that the licensee itself could not challenge the validity of the patent in a suit for royalties under the agreement. (United States v. Harvey Steel Co. (1905) 196 U.S. 310, 316.)

Office had refused by its rejections of March 21, 1957, and June 20, 1958, to allow Adkins' claims relating to bearings.

The rebuttal to these contentions is contained in the provisions of the agreement, which neither party asserts is ambiguous. An examination of those provisions demonstrates Lear incorrectly asserts that the license which was the subject of the agreement related *solely* to method claims contained in the application at the time the agreement was executed. Indeed, the parties could hardly have defined the scope of the license in a broader manner. It was to cover not only patented or patentable claims disclosed or intended to be disclosed by the application attached as Exhibit B to the agreement but also such claims in other applications filed for different but related inventions revealed by the exhibit.

Nowhere in the agreement was there a restriction as to the type of claims (i.e., apparatus or method claims) to which the license was to apply, nor any implication that the coverage of the agreement was to be restricted to claims in the application at the time of the agreement. Under section 2(a) Adkins granted to Lear an exclusive license under all the patented or patentable claims of Exhibit B and "any patents hereafter issued thereon" to manufacture and sell products containing his inventions. The term "claims" was defined as those claims which were patented or patentable. Paragraph 3(a) provided that royalties were to be paid on products incorporating Adkins' "inventions" and that term was defined (par. 1(d)) as "all claims . . . disclosed or intended to be disclosed" in Exhibit B "but only to the

extent that such claims . . . are patented or patentable" by Adkins.[17]

Thus it appears that Adkins granted Lear a license on all patented or patentable claims of Exhibit B and the claims of any patents issuing thereon, and Lear agreed to pay royalties on all products incorporating patented or patentable inventions disclosed or intended to be disclosed by Exhibit B, which is defined in paragraph 1(b) as follows: "The phrase Exhibit 'B' as used in this Agreement shall be deemed to refer to and include the application for United States Letters Patent filed on February 15, 1954, attached hereto, and all continuations and divisions thereof, and all patents issued or issuing thereon to Adkins with respect to the inventions disclosed or intended to be disclosed therein and all improvements thereof, and all renewals, extensions, reissues of any patents issued pursuant thereto."

It clearly appears from the provisions quoted above that the parties intended to license not only those claims eventuating in a patent which were set forth in the application at the time of the agreement, but also any claims intended to be disclosed in the application, without any restriction as to the type of claims allowed.[18] The license extended even to related inventions disclosed

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[17]Lear states that the license extended only to *validly* patented claims. However, the provisions of the agreement setting forth the scope of the license do not so state. The validity of the patent was adverted to in the agreement only in connection with the right to terminate if the patent "was subsequently held invalid." As pointed out in footnote 16, *ante*, the quoted words constitute a condition subsequent which could not be exercised by Lear until after a patent had been issued.

[18]As noted above, Adkins could not, under the patent laws, amend his application to substitute claims describing an invention entirely different from that described in the original application.

by the application or improvements of a disclosed invention for which a divisional or continuation application would be required and which would eventuate in a patent. Lear's obligation to pay royalties was, of course, based on the use of such inventions in its products.

The unimportance of particular application claims at the time the agreement was consummated is indicated by the fact that Exhibit B did not constitute a copy of the application as it then existed in the Patent Office but contained claims which, with the knowledge of both parties, had already been rejected. The application was, as we have seen, filed on February 15, 1954, and the claims going to a method of bearing alignment as well as Claim 9 had been rejected on September 8, 1954. Amendment A, also relating to a method of bearing alignment, was filed on March 7, 1955. Both parties were aware of this but nevertheless Exhibit B did not include Amendment A and indicated the claims in the form in which they had appeared in the original application.

Lear knew that the method claims in the original application had been rejected prior to the execution of the license agreement, yet the terms of the contract not only failed to restrict the license to method claims or to claims in the application at the time the contract was signed but defined the scope of the license in an extremely broad manner. Under these circumstances, Lear's contention that it bargained only for a license of claims relating to a method of aligning bearings cannot be sustained.

Moreover, there is nothing in the contract to indicate that Lear could unilaterally anticipate Patent Office action and determine, prior to final action by that

agency, that Adkins could not obtain a patent on the invention disclosed or intended to be disclosed by the application. Section 6 provided that Lear could terminate the agreement in the event the Patent Office *refused* to issue a patent on the substantial claims of Exhibit B. There was no way to determine in advance of final action whether a refusal would eventuate or whether Adkins would receive a patent. Neither of the rejections of the Patent Office prior to Lear's termination of the agreement were denominated final rejections. Lear had the advice of counsel experienced in patent matters in negotiating the agreement, and it must have known that the prosecution of an application consists of the rejection and amendment of the claims of the application and that this procedure is time-consuming. Nevertheless, it unilaterally determined after the first rejection of the claims subsequent to the agreement that it would no longer pay royalties on the steel gyros and, after a second rejection, it terminated the agreement altogether on the ground, *inter alia*, that the Patent Office had refused to issue a patent on the substantial claims of the application. There is not the slightest indication in the agreement that the parties were concerned with intermediate actions of the Patent Office in rejecting particular types of claims, and it cannot be said that there was a refusal to grant a patent as to the claims of Exhibit B, as defined in the agreement, on the basis of these intermediate rulings.[19]

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[19]Another contention made by Lear is that Adkins improperly added new matter to his application in an amendment to the specifications filed on December 22, 1958. It is argued that by this amendment Adkins changed his invention to something entirely different than was contemplated by the parties when they entered into the license agreement. In view of the conclusion reached above, that the parties intended to license

Lear relies on Marvin v. Mills Alloys, Inc. (1939) 31 Cal.App.2d 549, in support of its contention that it could unilaterally determine prior to final Patent Office action that Adkins would not obtain a patent. There, the agreement provided that the plaintiff granted to the defendant a license to use a described invention. The invention was a one-element device which the agreement stated had been manufactured by the defendant previously. It was also provided that the plaintiff would file an application for a patent on that device and that if he was finally unsuccessful in obtaining a patent for it, royalty payments would cease. The plaintiff filed an application in accordance with the agreement, but the application was denied on the ground that patents had been obtained on the same invention by another. The defendant refused to pay further royalties. Thereafter, the plaintiff obtained a patent for a three-element invention, which included the single-element device the defendant was manufacturing. It does not appear whether the application upon which the patent was issued was the same one as originally filed.

The court held that the three-element device of the patent was different from the device manufactured by the defendant, that the plaintiff was unable to secure a patent on his original invention, which was the subject matter of the agreement, and that, therefore, the defendant was not liable for payment of royalties for manufacturing the original invention.

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any patent which issued on the basis of Adkins' application (subject to certain conditions subsequent to the issuance of the patent giving Lear the right to effect a termination), we need not discuss the substance of this contention in reaching a conclusion on the issue of termination.

The differences between *Marvin* and the instant case are obvious. The question decided there was whether the plaintiff obtained a patent on the same device as was specifically referred to in the agreement. Here, the agreement related to any patented or patentable invention disclosed or intended to be disclosed by the claims of the application, not to a particular device described. There is dictum in *Marvin,* not necessary to the decision, that when the Patent Office denied the plaintiff's application "no patent could be obtained by him except upon a different invention." In view of the normal procedures followed in patent applications, we disapprove this language insofar as it implies that a single rejection of an application by the Patent Office constitutes a final determination that no patent may be issued on an invention disclosed in an application.

The next question to be determined is whether the license agreement was validly terminated under paragraph 2(a).

Lear had the right, under paragraph 2(a) to cancel the license upon 90 days' written notice to Adkins. Lear maintains that this provision granted it an absolute right to cancel the agreement at any time without discontinuing the use of Adkins' invention, while Adkins asserts that when the license agreement is viewed as a whole it shows that Lear could not exercise its right to terminate unless it also stopped utilizing his invention.

Lear urges that we should not require the cessation of manufacture as a condition precedent to 2(a) termination because another provision of the agreement (paragraph 3(g)) indicates that the parties had cessation of manufacturing in mind when they entered

into the agreement, and if they expressed such a condition precedent as to one contingency they would have, if they so intended, expressed it as a condition to 2(a) termination as well. Paragraph 3(g) provided that Lear must pay Adkins minimum royalties of $500 a year from January 1, 1957 onward so long as the license was still in effect (e.g., whether or not Lear used Adkins' invention) and that if Lear failed to pay minimum royalties Adkins could cancel the agreement and thereafter Lear would be prohibited from using the invention. A number of cases are cited in support of Lear's argument and, while their holdings favor Lear, they make clear that the ultimate consideration in determining whether to imply a covenant in an agreement is the intention of the parties as shown by the contract construed as a whole.[20]

A covenant may be implied where it is indispensable to effectuate the intention of the parties, where it is clear from the language used that the provision was so clearly within their contemplation that the parties deemed it unnecessary to express it, where it would

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[20]In County of Alameda v. Southern Pac. Co. (1961) 55 Cal.2d 479, 488, it was held that where a contract set forth two particulars in which one party would indemnify another for negligence, when the contract was construed as a whole it was reasonable to conclude that they would have made express provision for indemnification under a third set of circumstances, if they had so intended. In Stimpson Computing Scale Co. v. W. F. Stimpson Co. (1900) 104 F. 893, a license agreement under an issued patent provided that the licensee could terminate the contract on six months' notice in writing of its intention to discontinue manufacturing a device "under this contract." The court held that when all the language of the agreement was considered, the effect of the provision was only that manufacture after notice of termination must cease under the terms of the contract but that there was nothing to indicate that the manufacturer intended to stop utilizing the invention apart from the contract. After termination, it was stated, the manufacturer might be subject to an action for infringement of the patent.

have been inserted into the contract if attention had been called to it, and where the subject is not completely covered by the contract. (Lippman v. Sears, Roebuck & Co. (1955) 44 Cal.2d 136, 142.) There seems little doubt that when the contract here in issue is viewed as a whole, it shows an intention that Lear would discontinue the manufacture of products using Adkins' invention if it terminated the agreement under paragraph 2(a). One indication of such an intention is that the termination provision of paragraph 6, under which Lear could terminate in the event the Patent Office refused to issue a patent on the substantial claims of the application, would be almost wholly redundant if Lear could, for any reason or no reason, exercise a right of termination under paragraph 2(a) and still continue to use Adkins' invention.

Another indication of the intention of the parties is provided by a comparison of two provisions of the agreement permitting Adkins to terminate in the event Lear defaulted in its payment of royalties. Under paragraph 3(g), as set forth above, Adkins could terminate the agreement if Lear failed to pay $500 in minimum royalties yearly, and thereafter Lear could no longer manufacture products containing Adkins' inventions. Paragraph 10(a) gave Adkins the right to terminate the agreement in the event Lear defaulted in the payment of *earned* royalties. However, this provision did not state that Lear would thenceforth be prohibited from manufacturing products incorporating Adkins' invention. It would be absurd to assume that the parties intended that Adkins could require Lear to stop using his invention if Lear failed to pay royalties of $500 a year but if Lear defaulted in its payment of

earned royalties in a very much larger amount, Adkins could terminate the agreement under paragraph 10(a) and nevertheless Lear could continue to use his invention. It seems evident that the parties did not expressly state in some provisions the requirement that Lear discontinue manufacturing products utilizing Adkins' invention in the event of termination, although they so intended.

Also persuasive are the provisions of two agreements entered into between Adkins and Lear on September 15, 1955, the same date as the license agreement. These agreements, relied upon by Lear in its answer as the basis of an affirmative defense, provided that Adkins released Lear from any claims he might have against Lear prior to September 15, 1955, including claims arising out of the agreement of December 29, 1951, *except* that he retained those rights which were secured to him by the simultaneously executed license agreement. Aside from the rights set forth in the license agreement, all inventions of Adkins prior to and after September 15, 1955, were to belong to Lear.[21]

When viewed in the light of these contemporaneous agreements, Lear's insistence that it could exercise paragraph 2(a) termination and still continue to use Ad-

[21]There is confusion in the record regarding these two agreements. They were attached as exhibits to Lear's second amended answer and their relevant portions were set forth in the answer as the substance of affirmative defenses to all the causes of action. There is no question of their due execution. However, when they were offered in evidence at the trial, the court excluded them as irrelevant to the first cause of action. Nevertheless, both parties rely on them in their arguments Lear contends that these contemporaneous contracts are integrated into the license agreement and that by virtue of the release agreement Adkins expressly contracted away all rights to any inventions except as set forth in the license agreement.

kins' invention amounts to an assertion that the parties intended by the license agreement to grant to Lear Adkins' right in the invention which was the subject of that agreement for the $500 recited as consideration for its execution.[22] That is, acceptance of Lear's contention would mean that although it was clearly understood prior to September 15, 1955, that Adkins' inventions conceived in his employment would be his own property, Lear could, the day after the license agreement was signed, simply by giving notice of termination under paragraph 2(a), extinguish Adkins' right in the invention covered by the license agreement because the simultaneously executed contracts released all of Adkins' other rights against Lear arising out of his employment. We cannot construe the license agreement in a manner so manifestly alien to its entire purpose.

Adkins argues persuasively that the purpose of paragraph 2(a) was to permit Lear to avoid the payment of minimum royalties in the event it no longer wished to use his invention. Under paragraph 3(g) such royalties were payable while the license was in effect, whether or not Lear used the invention, and if there had not been some provision permitting termination of the license by Lear in the event of nonuse, it would have been liable for the payment of minimum royalties throughout the 17-year life of any patent subsequently issued.

We comment on one other matter briefly before concluding the discussion of the license agreement. Lear placed in evidence a letter from one of its employees,

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[22]The provision setting forth the consideration itself negates such a construction since it states that the $500 is paid in consideration of the "foregoing" and "the covenants and conditions hereinafter contained."

stating that he believed he had introduced cemented-in bearing cups using a mandrel procedure in 1953, which was a year before Adkins filed his application for a patent. The device of cemented-in bearing cups using a mandrel procedure constitutes the essence of Adkins' invention, as described in his application. Lear's contention amounts to no more than a claim that it entered into a bad bargain when it signed the license agreement.

Since we have concluded that the license agreement was not properly terminated by Lear, it follows that Lear has been in breach of the contract since September 10, 1957, the date on which it ceased to pay royalties to Adkins on the steel gyros.[23] It follows also that the doctrine of licensee estoppel is applicable and Lear is foreclosed from challenging the validity of Adkins' patent. The trial court thus erred in granting Lear's motion for judgment notwithstanding the verdict as to the steel gyros on the ground that Adkins' patent is invalid. As set forth above, the court also granted a new trial in the alternative on several grounds, including insufficiency of the evidence.

One of the major bases of Lear's motion for a new trial was the assertion that the evidence was insufficient to support the jury's implied determination that Lear incorporated Adkins' invention in its products.

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[23]This conclusion is, of course, subject to our determination regarding the question of whether Lear used Adkins' invention. That is, Lear's termination under paragraph 2(a) is valid if it refrained from using Adkins' device. Since, as we have seen, Lear has stipulated that it continued to manufacture the steel gyros both before and after the termination letter of April 8, 1959, the question of termination is inextricably bound up in the issue of whether the instruments manufactured by Lear incorporated Adkins' invention.

The agreement clearly sets forth that royalties are to be paid only for patented or patentable claims which Lear utilized in its products. We are therefore presented with the second major issue in this case, i.e., whether there is any substantial evidence to support the trial court's conclusion, implicit in its order granting the new trial, that the steel gyros do not incorporate Adkins' invention as defined in the claims of the patent. (See Richardson v. Ham (1955) 44 Cal.2d 772, 775.) We conclude, for the reasons hereinafter stated, that the evidence establishes that Lear used Adkins' invention in its steel gyros and that there is no substantial evidence to the contrary.

In determining the question before us we must ascertain what it is that Adkins invented. The resolution of this issue requires that the claims of the patent be construed, and this is a question of law for the court. (Rogers v. Hensley (1961) 194 Cal.App.2d 486, 491; see 4 Walker on Patents (Deller 2d ed. 1965) pp. 66-67.) Although the present action is not for infringement of a patent but rather one for the recovery of royalties under a license agreement, the test whether the products manufactured and sold by the licensee come within the coverage of the patent is the same as that employed in a patent infringement suit. (American Photocopy Eq. Co. v. Ampto, Inc. (N.J. 1964) 198 A.2d 469, 475.)

Claims must be construed in the light of the specifications and drawings of the patent and the file history of the patent's prosecution. Claims which have been allowed cannot, under the doctrine of file-wrapper estoppel, be held to cover what has previously been eliminated from the patent application in order to avoid a rejec-

tion. (Oregon Saw Chain Corp. v. McCulloch Motors Corp. (9th Cir. 1963) 323 F.2d 758, 762, 768; Moon v. Cabot Shops, Inc. (9th Cir. 1959) 270 F.2d 539, 543.) A third rule applicable to the construction of the claims of a patent is that an accused infringer may cite the prior art to construe and narrow the claims of the patent, and if he is successful in demonstrating that he has built his device solely according to the teachings of the prior art, the mere fact that the device constructed reads upon the claims of the patent assertedly infringed does not render him liable. (Westinghouse Co. v. Formica Co. (1924) 266 U.S. 342, 351; Casco Products Corporation v. Sinko Tool & Mfg. Co. (7th Cir. 1940) 116 F.2d 119, 121.)

Adkins contended at the trial that the four steel gyros were covered by the literal language of the claims as well as under the doctrine of equivalents. Under this principle if two devices do the same work in substantially the same way and accomplish substantially the same result, they are the same, even though they differ in name, form or shape. (Graver Mfg. Co. v. Linde Co. (1950) 339 U.S. 605, 608.) The issue of infringement is a question of fact for the jury unless there is no substantial conflict in the evidence. (See 69 C.J.S. 1016.)

It is manifest from the most cursory examination of the record that the steel gyros, like Adkins' patent, utilize a pair of bearing cups which are positioned with use of a mandrel into oppositely placed receiving holes in a frame or gimbal, and cemented into place. The 2156 gyro, to be discussed later, like the illustration of the Adkins' patent application, utilizes spherical bearing cups which rest within conical receiving holes. The

steel gyros, however, utilize pairs of elements having a different configuration. The receiving holes are cylindrical in shape and the bearing cups consist of cylindrical discs which fit within the receiving holes but because of an oversized flange at the open end of the cup, cannot be inserted entirely within the hole. It is held in place not only by cement between the cylindrical surfaces within the hole, but also by cement between the flanged surface and shoulder of the hole. Our problem basically, is to determine whether such an apparatus "infringes" the apparatus described in Adkins' patent.

The file wrapper of Adkins' patent application shows approval and issuance of Claims 9 through 16, not to be confused with earlier claims, some of which bore the same numbers. These are all apparatus claims and differed basically from prior claims in that they related to a *pair* of bearing structures for the first time. Claim 9, which is the principal claim upon which the other allowed claims depend, states: "An apparatus for supporting bearings in aligned relationship which comprises a pair of bearing-receiving elements each providing means to removably support a bearing in a fixed relationship with said element, each of said bearing-receiving elements having a mounting surface by which it may be supported, means for supporting said bearing receiving elements at opposed relatively spaced positions, said supporting means providing supporting surfaces generally corresponding to said mounting surfaces and permitting said elements to be initially adjustably shifted relative to said supporting means into oriented positions where said bearing-supported means are in alignment with each other, and means to retain said

bearing-receiving elements in said oriented positions to permit pairs of bearings to be interchangeably mounted in aligned relationship supported by said bearing supporting means." One of the stated objects of the invention is ". . . to provide a novel method of aligning the various bearings in the gimbal mountings, whereby exact coaxial alignment and parallelism between opposed bearings may be achieved."

The receiving holes in the gimbal are illustrated in the drawing submitted with the application as being conical in shape, and the outer contours of the bearing cups as being spherical. In this connection it is stated in the specifications: "The engaging spherical and conical surfaces permit the bearing race axis to be oriented in any direction during the adjusting period whereby coaxial alignment and parallelism of the bearing races may be easily effected. Other surfaces capable of being aligned and fixed in position such as a sphere in sphere, knife edges or other devices may be used without coming outside the scope of this invention. . . ."

The specifications also provide as follows: "While the use of mating conical and spherical surfaces has been mentioned, it is apparent that other similarly cooperating surfaces can be used. For example, a spherical surface can be used within another spherical surface, and other combinations can be employed. . . . Further, not only may the confronting surfaces . . . be of any desired configuration, my invention also is not limited to the alignment of bearings of a gyroscope. . . . Modifications employing the principles of the present invention will occur to those skilled in the art. While a preferred form has been shown and described, it is to be understood that the invention is not to be re-

stricted to the particular form and arrangement of parts herein described and shown, except as limited by the following claims."

It is obvious that the literal language of Claim 9 and the specifications, which expressly make provision for "other surfaces capable of being aligned and fixed in position", "other similarly cooperating surfaces", and "confronting surfaces . . . of any desired configuration", intend to cover within the scope of the invention receiving holes and bearing cups having mating surfaces of any configuration which will permit the angular adjustment of the bearing cups to a common axis, unless expressly excluded by other specific language.

We are unable to discern any specific or inferential language of exclusion of the configurations utilized in the steel gyros. The language of the claim itself requires only that the two surfaces "generally correspond." We cannot infer therein any intent to limit such correspondence to the precise configuration of a spherical bearing cup and a conical receiving hole, any more than to a cylindrical hole and a cylindrical disc which partially rests within the hole, supported by a flanged part of the disc. Moreover, the specifications do not purport to limit the configurations to any one or more combinations of shapes, but instead contemplate all configurations which reasonably might perform the described function. (See Reiner v. I. Leon Co. (1960) 285 F.2d 501, 504; Filtex Corp. v. Amen Atiyeh (1954) 216 F.2d 443, 446-447; Chicago Pneumatic Tool Co. v. Hughes Tool Co. (1938) 97 F.2d 945, 946-947.)

Relying on the doctrine of file-wrapper estoppel, Lear claims that Adkins is estopped to assert that the al-

lowed claims cover the particular application of the bearing cup and receiving holes utilized in the steel gyros. The record does not support Lear. As stated, Claim 9 allows for bearing cups and receiving holes having mating surfaces of any configuration permitting angular adjustment. Here the accused apparatus falls within the literal language of the claim, thus determining the issue of coverage.[24] (Graver Mfg. Co. v. Linde Co. (1950) supra, 339 U.S. 605, 607.) Moreover, there is no basis for an estoppel because the particular claims at issue had not been previously rejected and thus had not been limited by Adkins as the result of a prior rejection, and this is also true with respect to the configurations claimed by Lear to differentiate its steel gyros from Adkins' patent.

Lear's further claim that Adkins' patent describes an apparatus "different from the invention contemplated by the parties and set forth in the patent application at the time of the execution of the license agreement," is not borne out by the file wrapper. Consistent with the application developments heretofore noted, the patented apparatus falls within the scope of the initial application and, because Lear has adapted it to its steel gyros, we must conclude that the patented apparatus was within the contemplation of the parties.

It is also argued that because the spherical cups come to rest in the conical receiving holes and, while thus bearing on the conical surfaces, are cemented into permanent place, Adkins' patent is limited to those configurations which provide for contact or ball joint action

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[24]As we shall see, it cannot be said in the present case that the device used in the steel gyros was built entirely according to the prior art.

between the elements.[25] There is nothing which supports this contention. Although, such contact would normally be made, the scheme of the patent does not require it and the apparatus would be functional with or without contact while the elements were adjusted and cemented into position. Conversely, the elements used in the steel gyros, although normally not in contact, would nevertheless be functional although contact was made. The question of contact, accordingly, is not material to the issues.

There is likewise no merit to the assertion that the steel gyros do not infringe upon Adkins' invention for the reason that alignment may be accomplished in the steel gyros by the lateral movement[26] of the bearing cups, whereas Adkins' invention does not provide for such movement. Although it is possible that lateral adjustment may accomplish some other desirable function or adjustment in the steel gyros, the alignment of the bearing cups in either the Adkins or steel gyros can be accomplished only by the angular displacement of the two cups to the same axis; that is, the axis of the mandrel, with or without lateral movement of the bearing cups. The added feature of lateral movement in the steel gyros, if it can be deemed as such, does not operate to negate an infringement of the Adkins patent if the steel gyros incorporate any claim set out in the patent. (See Temco Co. v. Apco Co. (1928) 275 U.S. 319, 328.)

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[25]In the steel gyros, cement may be interposed between all parts of the bearing surfaces.

[26]"Lateral movement" in these circumstances, sometimes referred to as "radial movement," is movement in a direction 90 degrees displaced from the coaxis of the bearing cups.

Even if the literal language of Claim 9 did not cover the adaptation utilized in the steel gyros, the doctrine of equivalents would require that we conclude that Lear utilized Adkins' invention. Here the steel gyros contain the same elements, although perhaps different in size, form and shape, as in the Adkins patent, and they accomplish substantially the same function in substantially the same way. As the Supreme Court said in Graver Mfg. Co. v. Linde Co. (1950), supra, 339 U.S. 605, at pages 607-608, "One who seeks to pirate an invention, like one who seeks to pirate a copyrighted book or play, may be expected to introduce minor variations to conceal and shelter the piracy. Outright and forthright duplication is a dull and very rare type of infringement. To prohibit no other would place the inventor at the mercy of verbalism and would be subordinating substance to form. It would deprive him of the benefit of his invention and would foster concealment rather than disclosure of inventions, which is one of the primary purposes of the patent system. The doctrine of equivalents evolved in response to this experience. The essence of the doctrine is that one may not practice a fraud on a patent."

It remains to be seen whether the steel gyros, although falling within the claims of Adkins' patent, nevertheless can be shown to rely solely on the teachings of the prior art, and thus permit Lear to escape any liability to Adkins. As stated above, we are required to examine the prior art not only to determine the scope of Adkins' invention but also to determine whether what is being built by Lear springs entirely therefrom. (See Casco Products Corporation v. Sinko Tool & Mfg. Co. (1940), supra, 116 F.2d 119, 121.)

Lear claims that "if defendant's devices, when compared with the teachings and disclosure of the prior art as construed by the court, accomplish substantially the same thing, and perform substantially the same result, in substantially the same way by substantially the same means as do the prior art patents then as a matter of law, defendant's products cannot infringe plaintiff's later-issued patent. Further, even if every detail of defendant's device is not completely taught by such prior art, but if it would require only ordinary mechanical skill to come up with defendant's devices in view of such prior art, then again defendant's devices as a matter of law, cannot infringe plaintiff's patent or incorporate a patentable invention of plaintiff." The trial court concluded that the prior art did, in fact, anticipate the steel gyros. It and Lear rely on the prior Schwan and Moody patents.

The Schwan patent discloses a device for aligning the rotor of a motor. It provides for a bearing, a bearing cup, and a means of fixing the cup to the frame of the motor. In these respects it is similar to the Adkins' patent. However, Schwan does not provide for angular tilt of the bearing cups, but rather for alignment of the bearings solely by the lateral movement of the cups. Parallelism is achieved in Schwan solely by the built-in parallelism of the surfaces to which the bearings cups are attached, whereas Adkins teaches that parallelism as well as coaxial alignment is to be achieved through the relative angular displacement of the bearing cups. Clearly, Schwan does not provide for the same kind or degree of cooperative relationship between the elements as Adkins, and does not accomplish the same results Lear utilizes the Adkins' distinctions and relies on the Adkins' results.

In the Moody patent, bearings and bearing cups are fitted onto a shaft of a rotor and mounted by means of a press fit into a frame. The press fit is loose enough to permit the bearings to assume the alignment of the shaft when tapped with a hammer. Unlike Adkins, Moody does not provide for a prealignment of the bearings prior to the mounting of the shaft, does not permanently fix the bearing cups in position, and does not allow the removal and replacement of the bearings without realignment thereafter. Again, Lear's devices utilize all those distinctions by which Adkins' invention differs from that of Moody.

Other patents were urged by Lear as constituting prior art on which both Adkins and Lear relied. Thus, in Grenat, parallel and coaxial alignment is initially achieved, but bearing cups are not utilized, and bearings cannot be interchanged without disturbing the alignment. In Sperry, Carlson, and Herr, a "universally mounted" bearing is utilized which constantly adjusts itself to maintain alignment while in operation. It thus does not provide fixed coaxial and parallel alignment.

In no respect was the prior art demonstrated to provide, by individual patent or collectively, a means of permanently fixing a pair of replaceable bearings on coaxial and parallel alignment.[27] We cannot say, as urged by Lear, that the prior art disclosed a means by which it could accomplish substantially the same result, in substantially the same way by substantially the same means as does the Adkins' patent. Nor can we say

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[27]A Lear witness testified that the interchangeability of bearings without total realignment of parts "is the key to the whole gyro design."

that by the application of ordinary mechanical skills to the prior art, the same result may be accomplished. The prior art fails to anticipate the Adkins' patent, or the utilization made thereof by Lear. Although the basic elements of the patent—bearing cups, and a means of attaching the cups—have heretofore been utilized in cooperation with each other, Adkins nevertheless makes a significant step forward in the innovation and utilization of the cooperative relationship by which he employs these elements. (See Bates v. Cole (1878) 98 U.S. 31, 48; International Manufacturing Co. v. Landon, Inc. (1964) 336 F.2d 723, 726.) In *Bates,* supra, at page 48 of 98 U.S., the United States Supreme Court pointed out that where the thing patented consists of a combination of old elements, incapable of division or separate use, the alleged infringer cannot escape liability by showing that separate parts of the entire invention are found in various prior patents because such evidence does not warrant the conclusion that the plaintiff is not the original inventor of the patented improvement asserted to be infringed.

We conclude that the record demonstrates, without substantial conflict, that Lear utilized the apparatus patented by Adkins throughout the period in question. This conclusion is significantly supported by Lear's admission, hereinafter considered, that the 2156 gyro infringes the Adkins patent. The record shows that the 2156 gyro differs from the steel gyros only by the configuration of the mating surfaces of the bearing and receiving holes. Accordingly, the order granting the motion for a new trial cannot be affirmed on the ground of insufficiency of the evidence. Indeed, when the claims of the patent are interpreted in the manner

set forth above, the conclusion that Lear utilized Adkins' invention in its steel gyros is compelled by the record.

The motion for a new trial was also granted on the ground that the jury awarded excessive damages under the influence of passion or prejudice. A witness for Adkins testified that the royalties due under the provisions of the contract were $904,474.49, which was the exact amount awarded by the jury. This figure was based upon data supplied by Lear as to sales of products assertedly incorporating Adkins' invention, as well as upon Adkins' views as to which products were royalty-bearing. Adkins' contention, which the jury accepted, was that under the agreement Lear was required to pay royalties not only upon the gyros which utilized his apparatus but also upon certain other components and accessories manufactured by Lear for use with the gyros. Lear's sole basis for a new trial on the question of damages was that the jury improperly included in the damages awarded, royalties resulting from the sale of components and accessories independent of the gyro itself. The determination of this question depends upon the construction of the words "gyro system" as used in the agreement. If this term is construed in the manner asserted by Adkins, the damages awarded by the jury are correct as a matter of law.

The agreement provided that royalties were to be paid on all gyro assemblies and all gyro systems embodying Adkins' invention. These terms were defined in the agreement as set forth in the footnote.[28] For our

[28]Paragraph 1(e) of the agreement provided: "The term 'gyro assembly' as used herein is defined as the cased instrument which intimately contains the gyro structure and other

(This footnote is continued on the next page)

purposes a "gyro assembly" is the gyro itself, and a "gyro system" consists of the assembly together with other components and accessories. There is no dispute with respect to gyro assemblies—the parties agree that the whole of any assembly embodying Adkins' invention is subject to a royalty. The dispute relates to whether particular components and accessories are to be included within a system, and thus to be subject to the royalty. In determining whether a particular component or accessory constitutes a part of a gyro system and thus is royalty-bearing, it was provided that the test would be whether removal of that particular item from the system affected the accuracy of the signal which the system delivered to indicators, recorders or other consumers of the output signal. If accuracy was affected, the accessory or component was deemed to be a part of the gyro system. The parties referred to this as the "accuracy affecting test."

In answer to interrogatories and by stipulation, Lear admitted that a large number of components and accessories manufactured by it and incorporated into its systems met this test. The uncontradicted evidence established that other products, not included in the admissions, also met this test.

Lear argues that the accessories claimed by Adkins to meet the accuracy-affecting test and, therefore, to be

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appurtenances necessary for proper operation of the gyro structure, all of which are included within the gyro assembly case."

Paragraph 1(f) provided: "The term 'gyro system' as used herein is defined as the 'gyro assembly' and components or accessories necessary to produce earth and/or aircraft gyro signals for use by other equipment such as indicators, autopilots, bombing systems, fire control systems, etc., which such other equipment such as indicators, autopilots, bombing systems, fire control systems, so using the gyro system signals shall not be considered as part of the gyro system."

royalty-bearing do not meet these qualifications. This contention is based upon the testimony of an employee of Lear that although Lear had admitted that the products designated in the interrogatories in question were accuracy-affecting, these admissions were based upon the definition of the term "gyro system" as generally used in the industry. He went on to state that this term, *as used in the agreement,* had a much more restricted meaning and that when viewed in the light of this limited definition the accessories designated in the interrogatories were not accuracy-affecting. His views in this respect were based upon the language of the agreement itself.[29] Adkins testified that the meaning of the words in issue was the same in the agreement as in the industry and included the components and accessories in issue.[30] The trial court agreed with Adkins' construction of the agreement and instructed the jury that Lear had admitted that specified products were accuracy-affecting.

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[29]In essence, he testified that a "gyro system," as used in the agreement, meant only a gyro itself in its case and that if the broader definition of that term current in the industry were adopted, the accessories and components asserted by Adkins to be accuracy-affecting would be included in the term "gyro system." He referred not only to the direct definition of the words in issue as quoted in footnote *28, ante,* but also to various examples given in the agreement of the items to be included in computing net sales price on which royalties were to be based.

[30]Lear also argues that the parties themselves interpreted the royalty base to be only the gyros and not the other components and accessories. In support of this claim Lear points to the fact that prior to the purported termination of the agreement Adkins had accepted royalties on only the gyro itself in the model 1005 assembly. However, it is uncontradicted that Adkins did not know at the time he accepted these royalties what instruments the 1005 assembly consisted of. He could not, therefore, be viewed as having waived any rights he may have had in this regard.

Since the issue concerns the interpretation of a provision in a contract which neither party asserts to be ambiguous, the construction of the words in issue is a question of law for the court. (Estate of Platt (1942) 21 Cal.2d 343, 352.)[81]

In paragraph 1, subdivision (g), the agreement provides: "In determining whether any particular component or accessory constitutes a part of the gyro assembly or gyro system, the test shall be to ascertain whether removal of the particular component or accessory affects the accuracy of the gyro assembly or gyro system signals. If removal does affect the accuracy of the gyro assembly or gyro system signal, the component or accessory removed shall be deemed a part of the gyro assembly or the gyro system, but if removal does not affect the accuracy of such signal, then it shall not be deemed a part of the gyro assembly or gyro system."

It is immediately manifest that whatever Lear's admissions in the interrogatories and stipulations, and whatever the industry's definition of a gyro system, all components or accessories which affect the accuracy of the signal delivered to a consumer unit itself, are intended as a part of the royalty-bearing system un-

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[81] *Platt* holds that an appellate court is not bound by a construction of a contract based solely upon the terms of a written instrument without the aid of evidence, since there is no issue of fact to be determined. Here, both sides agreed that the words "gyro system" as used in the industry would include the components and accessories in issue, and the conflict related only to the interpretation of that term as used in the agreement itself. Thus, no factual issues are presented. (See also Civ. Code, § 1645.)

der the agreement.[32] We are satisfied that the components and accessories here under discussion, which are limited to units which amplify, control and adapt the gyro signal so that it may be utilized by consumer units, all affect the quality or accuracy of the signal. Lear's witness did not seem to dispute the fact that such components and accessories are accuracy-affecting and generally are properly a part of a "gyro system" as contemplated by the industry but appeared to contend instead that the parties hereto did not contemplate such a "gyro system." As indicated, we are not bound by his construction of the unambiguous language of the license agreement, and no basis appears for excluding the components and accessories in question in determining royalties.

As stated above, Lear's sole assertion in its motion for a new trial on the issue of damages relates to the definition of the term "gyro system." We have concluded that this term includes components and accessories apart from the gyro assemblies themselves. In view of the facts that, as so defined, the accuracy-affecting characteristics of these instruments were either admitted by Lear or shown by uncontradicted evidence, that Lear itself provided the sales information upon

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[32]It is also apparent from paragraph 3, subdivision (d), that the parties contemplated the payment of royalties on the whole of a system containing accessories and components not themselves directly incorporating Adkins' patent. That subdivision provides: "Net sales prices with respect to the sales of products incorporating inventions licensed hereunder and also containing other assemblies or components in addition thereto which do not incorporate the said inventions, shall for the purposes of determining royalties payable to Adkins, be the price established in each such contract for the 'gyro assembly' or 'gyro system' as hereinbefore defined which incorporates the inventions herein licensed."

which the calculation of damages on this basis was made, and that the jury awarded the exact amount so calculated, the order for a new trial was not justified on the ground that excessive damages were awarded under the influence of passion or prejudice.

The other grounds upon which a new trial was granted were irregularity in the proceedings on the part of plaintiff by which defendant was prevented from having a fair trial, errors in law occurring at the trial, and that the verdict was against the law. We are mindful of the fact that all presumptions favor the order granting a new trial as against the verdict, that the order will be affirmed if it may be sustained on any ground and that the burden is on the party attacking the order to show an unmistakable abuse of discretion on the part of the trial court in granting a new trial. (Yarrow v. State of California (1960) 53 Cal.2d 427, 434.) Nevertheless, under the circumstances of the present case, we must conclude that the trial court's order must be reversed.

Most of the asserted errors urged by Lear in support of its motion do not constitute error in view of the matters discussed in the earlier portions of this opinion.[88] The alleged errors not covered by the prior analysis related to the question of utilization by Lear of Adkins'

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[88]Thus, Lear urged that the trial court should not have refused to instruct the jury that Adkins' patent did not cover the steel gyros as a matter of law, that the Patent Office's rejection of Adkins' application on March 21, 1957, constituted a failure of consideration as a matter of law, and that the trial court's jurisdiction of the action ended on April 8, 1959, when the agreement was purportedly terminated.

invention and with one or two minor exceptions[34] involved asserted errors in giving or refusing instructions on the issue of utilization. We need not discuss these claims of error since they could not have been prejudicial to Lear in view of our conclusion that the record compels a determination in favor of Adkins on this issue.

One asserted error requires further elucidation. Lear urgently contended in support of its motion, that the trial court should have permitted it to amend its answer during the trial to add the defense of unclean hands against Adkins. This defense was based on an alleged fraud upon the Patent Office in that Perry E. Turner, a patent agent who was employed by Lear from 1954 until the end of 1957 and who counseled Lear with respect to Adkins' application during that period, was subsequently employed by the law firm which prosecuted the application in the Patent Office and assisted in the prosecution under the supervision of one of the attorneys of that firm. There was no error in this regard. First, this is not a suit in which Adkins is attempting to enforce his patent as such, and we are not concerned with defenses which might be available to Lear in the determination of questions of validity and infringement. The cause is based on rights emanating from a written agreement, and the patent itself is referred to only for the purpose of determining whether Lear used the invention therein set forth.[35]

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[34]Lear argued that the trial court erred in refusing to submit to the jury a large number of special interrogatories. It was also claimed that an exhibit introduced by Adkins was labeled in such a manner as to mislead the jury on the issue of the character of Adkins' invention.

[35]This reasoning also applies to other assertions by Lear that Adkins perpetrated fraud upon the Patent Office.

Moreover, Lear's claim of inequitable conduct by Adkins is unmeritorious on its face. Turner's employment by the law firm representing Adkins did not occur until several months after Lear breached the agreement on September 10, 1957, when it informed Adkins that it would no longer pay royalties on the steel gyros. There is no contention that Adkins was not thoroughly familiar with the steel gyros and no showing that Turner had any confidential information secured while he was an employee of Lear which he could communicate to Adkins in the amendment of his application.

The 2156 Gyro

The discussion above is also applicable to the 2156 Gyro except as it relates to coverage. The trial court applied the doctrine of licensee estoppel insofar as the 2156 gyro was concerned and held as a matter of law that Lear was barred from challenging the validity of Adkins' patent as to that instrument. It directed a verdict for Adkins on the 2156 gyro, and the parties stipulated that the royalties due for the period in question were $16,351.93. The trial court denied Lear's motion for judgment notwithstanding the verdict as to this gyro, but the order granting a new trial in the alternative covers all products in issue, including the 2156 gyro.

Lear concedes on appeal that it utilized Adkins' invention in its 2156 gyro. In view of this concession, the fact that the validity of the patent is not open to question, and the fact that the amount of damages was stipulated, the directed verdict in favor of Adkins and the denial of Lear's motion for judgment notwithstanding the verdict as to this gyro must be affirmed, and the granting of the motion for a new trial reversed.

It has been aptly stated that the trial court, no less than an appellate court, is expressly enjoined by article VI, section 13, of the Constitution, from granting a new trial for errors unless they are prejudicial, and that if it clearly appears that such errors could not have affected the result of the trial the court is bound to deny the motion. (Sparks v. Redinger (1955) 44 Cal.2d 121, 123.) Although the trial court may have erred in some regards with respect to instructing the jury on the question whether Lear utilized Adkins' invention, any errors which it may have committed could not have been prejudicial because, as we have concluded above, the jury would, in any event, have been required by the evidence to find in favor of Adkins on this issue. In view of our additional conclusions that Adkins' patent is presumptively valid and that the jury's determination of damages is correct as a matter of law, we are compelled to hold that the motion for a new trial as to the steel gyros must also be reversed.

We must, therefore, consider Lear's cross-appeal from the judgment entered on the jury's verdict on May 4, 1964, in favor of Adkins.[36] (Cal. Rules of Court, rule 3(a); see White v. Aetna Life Ins. Co. (1961) 198 Cal.App.2d 370, 378.) The contentions on the cross-appeal are identical to those discussed above or are clearly answered by the previous discussion. The only additional matter is Lear's argument that the trial court improperly excluded two letters sent to Lear by Adkins prior to the consummation of the license agreement. It is claimed that the exclusion of these letters was erroneous because they would be material if it were

[36]This judgment was amended on December 30, 1964, to show that the trial court had dismissed Adkins' second cause of action.

found that the license agreement was ambiguous regarding its scope or Lear's right to terminate. Since there is neither a claim by the parties nor a finding that the agreement is ambiguous in these respects, there was no error in the court's refusal to admit these documents into evidence.

L.A. 29206

This appeal is by Adkins from the portion of the trial court's judgment dismissing his second cause of action which was pleaded as an alternative in the event it was held that Adkins could not recover on the first cause of action for breach of the license agreement.[87] Adkins alleged in the second cause of action that he had an unpatentable invention embodying his ideas relating to bearing alignment and Lear was liable for use of this invention under the theories of misappropriation by Lear in breach of confidence and breach of an implied-in-fact contract, and that Lear was also liable under the theory of unjust enrichment. The trial court did not permit the introduction of evidence to support the second cause of action, and the jury's verdict for Adkins was based on the first cause of action. Since we have held that Adkins is entitled to recover from Lear on his first cause of action, this portion of the judgment, dismissing the second cause of action, must be affirmed.

L.A. 29207

This appeal by Lear consists of (1) its appeal from the judgment on the directed verdict as to the 2156 gyro and from the trial court's denial of its motion

[87]This is the judgment entered on May 4, 1964, on the jury's verdict in favor of Adkins and which was amended on December 30, 1964, to order the dismissal of Adkins' second cause of action.

for judgment notwithstanding the verdict as to that product; (2) its appeal from the whole of the judgment entered on May 4, 1964, on the jury's verdict in favor of Adkins;[88] and (3) its appeal from the trial court's amendment of the judgment dismissing Adkins' second cause of action. In connection with the latter, Lear contends that although the court acted properly in dismissing Adkins' second cause of action, it should have indicated that the reason for the dismissal was that Adkins had waived the second cause of action during the trial rather than because Adkins refused to elect between his first and second causes of action. As we have seen, the portion of the judgment dismissing Adkins' second cause of action must be affirmed.

L.A. 29205

This appeal is by Adkins' from a minute order of the trial court entered on January 24, 1964, requiring him to pay 45 percent of the cost of an independent audit of Lear's books. The total cost of the audit, which was made at Adkins' request, was $17,880. Its purpose was to determine the number and amount of sales made by Lear of products claimed by Adkins to be royalty-bearing.

Adkins insists that the trial court's order requiring that the audit be made was imposed as a sanction against Lear for its deliberate concealment of sales information in answers to interrogatories and; therefore, that the trial court abused its discretion in imposing a

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[88]The subject matter of (1) and (2) is also involved in L.A. 29204.

portion of the cost on him.[89] However, an examination of the record shows that the court ordered the audit as an aid to it and to the parties, especially Adkins, on the issue of damages. It stated that the audit involved a financial burden which Adkins would have to undergo in any event for trial preparation and that it had no right to impose upon Lear the burden of financing Adkins' trial preparation. The trial court made it clear from the outset of the discussion of the independent audit that Adkins would be required to pay part of the cost. Prior to the court's order, Lear had spent over $15,000 in auditing costs in order to comply with Adkins' requests for information, and Adkins had spent over $5,000 in checking the information which Lear had provided.

Under all the circumstances, it cannot be said that the trial court abused its discretion in apportioning part of the auditing costs to Adkins. (Greyhound Corp. v. Superior Court (1961) 56 Cal.2d 355, 379-380.)

The judgment entered on May 4, 1964, as amended on December 30, 1964, including the portion thereof entered on the directed verdict, is affirmed. The judgment notwithstanding the verdict is reversed. The order granting the motion for a new trial is reversed. The order denying Lear's motion for judgment notwithstanding the verdict as to the 2156 gyro is affirmed.

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[89]Initially, Adkins sought to obtain these figures by means of interrogatories. The information sought involved a number of complex problems and, although Lear made a number of attempts to furnish the information, Adkins was dissatisfied with the answers and made motions to have them stricken. He claimed that Lear was deliberately withholding the information he sought. Finally, he moved to appoint independent auditors and to have Lear pay the cost of the audit.

The order apportioning the costs of the audit is affirmed. The order granting judgment notwithstanding the verdict as to the steel gyros is not appealable, and the purported appeal therefrom is dismissed.

Adkins shall recover his costs on appeal.

Mosk, *J.*

We Concur:

Traynor, *C. J.*

McComb, *J.*

Peters, *J.*

Tobriner, *J.*

Burke, *J.*

Sullivan, *J.*

(Title omitted in printing)

Page 10 of Lear's "Petition for Rehearing" in the California Supreme Court.

[10]

I.

Restraint of Trade, the Possibility That an Applicant for a Patent May Change His Claims During Prosecution, Repudiation of an Agreement for Failure of Consideration, and the Public Policy Where Patents Are Concerned Were Not Considered by This Court in Applying the Doctrine of Licensee Estoppel.

The decision (p. 36) states that since the license agreement was not properly terminated by Lear, the doctrine of licensee estoppel is applicable and Lear is foreclosed from challenging the validity of Adkins' patent.

However, the Court has failed to consider several factors that permit Lear to contest the validity of Adkins' patent, even if the license was not terminated in accordance with its provisions.*

A. THE DOCTRINE OF LICENSEE ESTOPPEL DOES NOT APPLY WHERE THE LICENSE CONTAINS A PROVISION IN RESTRAINT OF TRADE.

The decision (p. 32) construes the license agreement [Ex. 8] to require that Lear must cease manufacturing the products of the license in order to terminate the agreement.

This constitutes a restraint of trade which is void and unenforceable under federal law, the common law, and

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*Lear does not waive its contention that the license was in fact terminated in accordance with its provisions, as more fully set out hereinafter.

Order Denying Rehearing.

Order Due January 12, 1968.

In the Supreme Court of the State of California, in Bank. L.A. Nos. 29204, 29205, 29206, 29207.

Adkins v. Lear, Inc.

Petition of Defendant and Appellant for rehearing DENIED.

Filed, Jan. 11, 1968.

Traynor
Chief Justice

OCT 21 1968
JOHN F. DAVIS, CLERK

APPENDIX.
Volume II.

IN THE

Supreme Court of the United States

October Term, 1968
No. 56

LEAR, INCORPORATED,

Petitioner,

vs.

JOHN S. ADKINS,

Respondent.

ON WRIT OF CERTIORARI TO THE SUPREME COURT OF THE STATE OF CALIFORNIA

Petition for Certiorari Filed April 9, 1968
Certiorari Granted May 20, 1968

Parker & Son, Inc., Law Printers, Los Angeles. Phone MA. 6-9171.

VOL. II

EXHIBITS ADMITTED IN EVIDENCE

Page

Exhibit 8—Agreement of September 15, 1955; Offered R.T. 296, lines 13-14; Admitted R.T. 296, lines 15 and 16 1

Exhibit 10—Adkins Patent No. 2,919,586; Offered R.T. 304, lines 20 and 21; Admitted R.T. 305, line 2 18

Exhibit 36— Letter of September 10, 1957; Offered R.T. 505, lines 19 and 20; Admitted R.T. 506, line 6 26

Exhibit 39—Letter of April 8, 1959; Offered R.T. 510, lines 10 and 11; Admitted R.T. 510, line 25 27

Exhibit 72—Drawing [not reproduced herein]; Offered R.T. 2461, lines 16 and 17; Admitted R.T. 2461, line 20 28

Exhibit P—File history of Adkins Patent 2,919,586; Offered R.T. 1328, lines 11-13; Admitted R.T. 1328, lines 14 and 15 29

Exhibit Y—Curriston letter of Nov. 23, 1962; Offered R.T. 1788, lines 22-24; Admitted R.T. 1789, lines 1-5 117

Exhibit A-27—U.S. Patent No. 2,531,334 granted John J. Grenat, on November 21, 1950; Offered R.T. 1138, lines 14 and 15; Admitted R.T. 1138, lines 16 and 17 118

Exhibit A-31—U.S. Patent No. 2,704,693 granted Clarence F. Schwan on March 22, 1955; Offered R.T. 1147, lines 11 to 14; Admitted R.T. 1147, lines 18 to 22 121

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Exhibit A-34—U.S. Patent No. 2,269,103 granted W.G. Harding et al. on January 6, 1942; Offered R.T. 1150, lines 20 and 21; Admitted R.T. 1150, line 22 126

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Exhibit A-45—U.S. Patent No. 2,633,544 granted F. W. Herr on March 31, 1953; Offered R.T. 1162, lines 12-15; Admitted R.T. 1162, line 16 148

Exhibit A-51—U.S. Patent No. 1,342,397 granted E. A. Sperry on June 1, 1920; Offered R.T. 1292, lines 13-16; Admitted R.T. 1292, lines 21-24 152

EXHIBITS NOT ADMITTED IN EVIDENCE

Exhibit 7—Agreement of December 29, 1951 (Identification only) Offered R.T. 294, lines 10 and 11; Rejected-objection to admission in evidence sustained R.T. 295, lines 13-16; Marked for identification only R.T. 296, lines 1 and 2 161

Exhibit 8

AGREEMENT

THIS AGREEMENT, made and entered into this 15th day of Sept, 1955, by and between JOHN S. ADKINS of Santa Monica, California, hereinafter referred to as "Adkins" and LEAR, INCORPORATED, a corporation of Illinois, hereinafter referred to as "Lear."

WITNESSETH:

(A) WHEREAS, Adkins represents and warrants that he owns United States Letters Patent No. 2,542,975, issued to him on February 27, 1951, for an Erecting Mechanism for Reducing Turn Errors in Vertical Gyroscopes, subject to a reservation that the invention described therein may be manufactured and used by or for the Government of the United States for governmental purposes without the payment of any royalty thereon, a copy of which Letters Patent is hereto attached and hereafter referred to as Exhibit "A" and incorporated herein as a part hereof; and Adkins represents that there are no outstanding licenses or agreements that prevent him from entering into a license agreement with respect to said Patent and the inventions covered therein, all as hereafter set forth; and

(B) WHEREAS, Adkins represents and warrants that to the best of his knowledge and belief he is the owner of the inventions covering the substantial claims as disclosed or intended to be disclosed in the Application for U. S. Patent on gyroscopes attached hereto and hereafter referred to as Exhibit "B" and incorporated herein as a part hereof, which application was filed on February 15, 1954, and is presently pending in the United States Patent Office and that there are no licenses or agreements outstanding which prevent him from granting unto Lear an exclusive license respecting said inventions and products embodying said inventions, in accordance with the further provisions hereof, and

(C) WHEREAS, Adkins represents and warrants that to the best of his knowledge and belief he is the owner of the inventions disclosed or intended to be disclosed for a no-gimbal lock feature for a gyroscope as set forth in Disclosure I attached hereto and hereafter referred to as Exhibit "C" and incorporated herein as a part hereof, and that there are no licenses or agreements outstanding which prevent him from granting unto Lear an exclusive license respecting said inventions and products embodying said inventions, in accordance with the further provisions hereof; and

(D) WHEREAS, Lear is to acquire a non-exclusive license under said Exhibit "A" hereof and an exclusive license under any and all applications for patents and patents claiming the subject matter referred to in Exhibits "B" and "C" hereof, to manufacture and sell products embodying the respective inventions of said Exhibits "A", "B" and "C".

NOW, THEREFORE, in consideration of the foregoing and $500.00 in hand paid, receipt whereof is hereby acknowledged, and of the covenants and conditions hereinafter contained, it is hereby agreed by and between the parties hereto as follows:

1. DEFINITIONS:

(a) The phrase Exhibit "A", as used in this agreement shall be deemed to refer to and include United States Letters Patent No. 2,542,975 and all renewals, extensions and reissues thereof, issued on the subject matter of said letters patent and all improvements thereof.

(b) The phrase Exhibit "B" as used in this Agreement shall be deemed to refer to and include the application for United States Letters Patent filed on February 15, 1954, attached hereto, and all continuations and divisions thereof, and all patents issued or issuing thereon to Adkins with respect to the inventions disclosed or intended to be disclosed therein and all improvements thereof, and all renewals, extensions, reissues of any patents issued pursuant thereto.

(c) The phrase Exhibit "C" as used in this Agreement shall be deemed to refer to and include Disclosure I attached hereto and all applications for United States Letters Patent filed with respect to the inventions disclosed or intended to be disclosed therein, and all improvements thereon and all continuations and divisions of all such applications and all patents issued or issuing with respect thereto and all renewals, extensions, and reissues thereof.

(d) The Term "said inventions" as used in this Agreement shall include (1) all claims and inventions disclosed or claimed in said Exhibit "A", and (2) all claims and inventions disclosed or intended to be disclosed in said Exhibit "B" and (3) all claims and inventions disclosed or intended to be disclosed in said Exhibit "C", but only to the extent that such claims or inventions mentioned in said Exhibits are patented or patentable by Adkins.

(e) The term "gyro assembly" as used herein is defined as the cased instrument which intimately contains the gyro structure and other appurtenances necessary for proper operation of the gyro structure, all of which are included within the gyro assembly case. The term "gyro structure" as used herein is defined as the high-speed gyro rotor, gimbals, frame and attachments thereto.

(f) The term "gyro system" as used herein is defined as the "gyro assembly" and components or accessories necessary to produce earth and/or aircraft gyro signals for use by other equipment such as indicators, autopilots, bombing systems, fire control systems, etc., which such other equipment such as indicators, autopilots, bombing systems, fire control systems, so using the gyro system signals shall not be considered as part of the gyro system.

(g) In determining whether any particular component or accessory constitutes a part of the gyro assembly or gyro system, the test shall be to ascertain whether removal of the particular component or accessory affects the accuracy of the gyro assembly or gyro system signals. If removal does affect the accuracy of the gyro assembly or gyro system signal, the component or accessory removed shall be deemed a part of the gyro assembly or the gyro system, but if removal does not affect the accuracy of such signal, then it shall not be deemed a part of the gyro assembly or gyro system.

(h) Whenever in this Agreement the words "claim", "claims", "invention", or "inventions" are used, in accordance with the context of the terms of the Agreement, the plural shall apply to the singular or the singular shall apply to the plural.

2. GRANT.

(a) Subject to the provisions for termination hereinafter set forth, Adkins hereby gives and grants unto Lear (1) a non-exclusive right and license under all the claims of said Exhibit "A" and (2) an exclusive license under all the claims of said Exhibits "B" and (3) an exclusive license under all the claims of said Exhibit "C", to manufacture or have manufactured for it, use and sell products and parts and components thereof (including gyros, gyro systems, gyro apparatus and gyro mechanisms) covered by or containing one or more or all of the inventions and any patents issued or hereafter issued thereon and any divisions, continuations or reissues thereof, and all modifications and improvements thereof, throughout the United States and all foreign countries; it is understood, however, that whenever the word "claims" is used in this paragraph it shall mean the claims in the respective Exhibits which have been patented or will be patentable by Adkins. Lear shall have the right on ninety days' prior written notice to Adkins, to terminate any one or more of the licenses herein granted.

(b) Lear at its option and expense may, for and in the name of Adkins, file applications for patents in any foreign countries for any of the inventions licensed herein except those under Exhibit "A". In the event Adkins desires to have an application for a patent respecting such inventions filed in any designated foreign country he shall so notify Lear in writing. Lear shall thereupon have ninety days from and after receipt of such notice, to determine whether it wishes to file such application in the country designated; and if within said period it so files at its expense, it shall retain and have the exclusive right and license to use said inventions in the manufacture and sale of products embodying such inventions in such foreign country. However, if it elects not to so file an application and thereafter Adkins files an application in such foreign country at his expense, then from and after the date of the

issuance of the patent, Lear shall have a non-exclusive right and license to use the inventions described in said patent so issued, in the manufacture and sale of products embodying such inventions in such foreign country.

(c) This agreement shall continue in force and effect until the expiration of the last to expire of any patent now or hereafter issued and related to the subject matter of this agreement, including all continuations, renewals, extensions and reissues thereof, unless terminated sooner by act of the parties pursuant to the provisions hereof.

3. ROYALTIES.

(a) While one or more of the licenses granted under this Agreement is in effect, Lear agrees to pay Adkins with respect to products incorporating said inventions manufactured and sold under those licenses that are in effect, royalties of 1 1/4% based on net sales prices as hereinafter in sub-paragraphs (c), (d) and (j) defined, received by Lear for said products, it being understood that said rate shall be paid only on products incorporating one or more or all of said inventions.

(b) No royalties shall be computed or paid on account of the manufacture by or for or sale to, on behalf of, or for the use of the U. S. Government, of products which incorporate only the inventions disclosed in or covered by Exhibit "A".

(c) Net sales prices on which royalties are payable shall be the final sales price established for the products sold after price adjustment or price redetermination whether voluntarily or by contract. In the case of cost reimbursement contracts, the final price shall be the costs finally allowed and paid to Lear. In the event the final price is higher than the initial or interim price, Lear will pay to Adkins the additional royalties due him upon determination of such final higher price. In the event the final price is lower than the initial or interim price, Lear shall deduct from future royalties thereafter payable to Adkins, an amount equal to 25% of each future royalty payment subsequently becoming due, until it shall have received the full amount of the excess royalties theretofore paid to Adkins..

JSA

(d) Net sales prices with respect to the sales of products incorporating inventions licensed hereunder and also containing other assemblies or components in addition thereto which do not incorporate the said inventions, shall for the purposes of determining royalties payable to Adkins, be the price established in each such contract for the "gyro assembly" or "gyro system" as hereinbefore defined which incorporates the inventions herein licensed. Where no separate price is established in any such contract for the "gyro assembly" or "gyro system", net sales price of such "gyro assembly" or "gyro system" shall be the price charged by Lear, under each such contract, for a spare "gyro assembly" or "gyro system" which incorporates the inventions herein licensed. Where there is no price established for such gyro assembly or gyro system in any such contract, either initially or as a spare part, then the net sales price of the gyro assembly or gyro system on which royalties are paid, shall be that part of the price of the entire product, which the cost of manufacture of the gyro assembly or gyro system incorporating the inventions, bears to the cost of manufacture of the entire product.

The following specific examples will serve to illustrate the method of determining which items shall be included in computing net sales price on which royalties are based:

(1) In a VGI utilizing any one or more of the inventions, the royalty shall be computed on the net sales price of the "gyro system" which is the Type K-4 control. The indicator is not included in computation of net sales price since if the indicator is removed, the accuracy of the gyro system signals would not be affected.

(2) In compass systems, such as the Lear Type 1284, utilizing any one or more of the inventions, the royalty shall be computed on the net sales price of the complete "compass system", except for the earth's magnetic detector and the indicators, since if the earth's magnetic detector and indicator are removed, the accuracy of the gyro assembly signals as such would not be affected.

(3) In indicator systems such as the NAFLI, utilizing any one or more of the inventions, the royalty shall be computed on the net sales price of the "gyro assembly." The basic purpose of the NAFLI system is to provide indication, and the system other than the "gyro assembly" will not be included in the amount on which the royalty is computed, since if all components of the NAFLI system other than the "gyro assembly" are removed, the accuracy of the "gyro assembly" signals as such would not be affected.

(4) In auto pilots such as the Type F-5, utilizing any one or more of the inventions, the royalty shall be computed on the net sales price of the "gyro assembly." The basic purpose of the F-5 auto pilot is to control the aircraft, and the system other than the "gyro assembly" will not be included in the amount on which the royalty is computed, since if all components of the F-5 auto pilot other than the "gyro assembly" are removed, the accuracy of the "gyro assembly" signals as such would not be affected.

(e) It is specifically recognized and agreed by the parties hereto that prior to January 1, 1955, no sales were made by Lear of any products under the licenses herein granted or subject to royalty as herein provided. Lear shall submit to Adkins a full and correct statement of the net sales prices received on all sales by it of products subject to royalty under the licenses herein granted which are then in effect during each quarter-annual period beginning January 1, 1955. For the purposes of this Agreement, quarter-annual periods are defined as follows: the first quarter-annual period shall be the months of January, February, March; the second shall be April, May, and June; the third, July, August, and September; and the fourth, October, November, and December. Lear shall submit the said statement for each quarter-annual period within sixty days after the end of each quarterly period, that is, within sixty days after March 31st, June 30th, Septemoer 30th and December 31st of each year, and each statement submitted shall be accompanied by payment in full for royalties shown due. The first such statement to be made under this Agreement shall be submitted to Adkins within sixty days after Sept. 15, 1955, covering the period from January 1, 1955, through Sept. 30, 1955.

(f) If any products subject to royalty are sold by Lear to any person, firm, or corporation in which Lear has any direct or indirect pecuniary interest in excess of 50% of the total capital and surplus of such person, firm, or corporation, and said products shall be resold by said purchaser at a price greater than Lear's sales price, then in the computation of royalties due hereunder, the net resale price received by said purchaser on resales of said products shall be taken as Lear's net sales prices received for said products.

(g) Unless this Agreement is sooner terminated as herein provided, Adkins shall be entitled to receive a minimum royalty in the sum of $250.00 upon execution hereof, and on January 1, 1956, and a minimum royalty in the sum of $500.00 on January 1, 1957, and on January 1st of each year thereafter that this Agreement is in effect, on account of each of the following groups of products manufactured and sold by Lear, (provided the Licenses as to Exhibits A, B, and C, respectively, are in force and effect), (a) embodying the inventions of Exhibit "A"; (b) embodying the inventions disclosed or intended to be disclosed in Exhibit "B" and (c) embodying the inventions disclosed or intended to be disclosed in Exhibit "C". The payments made under this paragraph shall be applied as a credit in reduction of the royalty payments due Adkins under this Paragraph 3, for such year. If said minimum royalties are not paid, then the only right of Adkins shall be to cancel, such one of the Licenses herein granted, for which minimum royalty payments as above provided for have not been paid by Lear. After receipt of notice of cancellation of such License, Lear shall have no further right to manufacture products incorporating the inventions disclosed under such cancelled License, except that Lear may for a period of ninety days from and after such notice of cancellation complete the manufacture and sell any of such products then in process or on hand, and Adkins shall receive his royalty on all of such products as in Paragraph 3 hereof provided. Nothing herein set forth shall be deemed to obligate Lear to manufacture, produce or sell any products embodying inventions described and set forth in Exhibits "A", "B" and "C" hereof. If during any one full year beginning after January 1, 1959, the total annual net sales prices of products sold embodying said inventions as herein defined, either separately or in combination, do not exceed $35,000.00 under the licenses herein granted, then unless such

failure is the result of war, act of God, strikes, national emergency, governmental rules or regulations or any other cause beyond Lear's control, said licenses with respect to inventions contained in Exhibits "B" and "C" shall thereafter become non-exclusive licenses instead of exclusive licenses as herein granted.

(h) If under the terms hereof Lear cancels its license under the inventions contained in Exhibit "C", then the license granted with respect to the inventions contained in Exhibit "B" shall continue as an exclusive license. In such event Adkins shall thereafter have the right to use and to license others to use, the inventions contained in said Exhibit "B" but only in products which also embody in combination the inventions disclosed in Exhibit "C". Adkins, however, shall have no right to use or to license others to use the inventions contained in Exhibit "B" in the manufacture or sale of any products unless such products also incorporate the inventions disclosed in Exhibit "C".

[illegible]

(j) The term "net sales price" wherever used herein shall not include the amount of any tax, insurance, duty, packing, shipping, or crating charge or any other similar items, which are separately indicated and charged in the agreement or invoice, or of which written notice is given to Adkins.

4. BOOKS AND REPORTS

Lear agrees to keep accurate and complete books and reports showing in detail all said products made and sold by it under the licenses herein granted, and agrees that said books and records relating only to sales of said products

shall be open for inspection, subject to any security regulations of the United States Government, by Adkins or a Certified Public Accountant selected by him, during normal business hours, but no oftener than twice a year. In the event that any royalty payment is based upon Lear's cost of manufacture, as in Paragraph 3(d) hereof provided, then in such event Adkins shall have the right, subject to any security regulations of the United States Government, to be exercised only once with respect to any such royalty computation, to inspect Lear's books and records relating only to the cost of manufacture of that specific product, the royalty for which was computed upon Lear's manufacturing cost. Adkins agrees that neither he nor such Certified Public Accountant selected by him will disclose to any person, firm, company, or corporation any information or knowledge which may be obtained from or disclosed in any books and records of Lear, and Adkins further agrees that he and such Certified Public Accountant will treat all of such information and knowledge as confidential. Lear agrees that, on or before the dates above specified for payment of royalties to Adkins, it will deliver to Adkins complete reports showing in detail all items covered by said royalty payments and how the royalties in each case have been computed.

5. SUITS FOR INFRINGEMENT.

In the event that any third party or parties shall institute suit against Lear asserting that the manufacture, sale or use by Lear of products under the licenses herein granted, constitutes an infringement of a patent or patents owned by the plaintiff or plaintiffs in such suit, then Lear shall place in escrow all further royalty payments due or payable to Adkins (including Minimum Royalty Payments) under this Agreement with respect to the license involved, from the time of the institution of such suit until such suit shall be finally terminated. Lear shall have the right but shall not be obligated to defend such suit; and if Lear successfully defends such suit, it shall bear the cost of such defense, but if Lear unsuccessfully defends the suit, then Lear shall be reimbursed from the escrow account by an amount equal to the costs, attorneys, and other fees, judgments and other expenses Lear incurred due to such suit, less the amount it may be awarded and collect from the said plaintiff or plaintiffs, and any residue from the escrow account shall then be paid to Adkins. However,

event that any royalty payment is based upon Lear's cost of manufacture, as in Paragraph 3(d) hereof provided, then in such event Adkins shall have the right, subject to any security regulations of the United States Government, to be exercised only once with respect to any such royalty computation, to inspect Lear's books and records relating only to the cost of manufacture of that specific product, the royalty for which was computed upon Lear's manufacturing cost. Adkins agrees that neither he nor such Certified Public Accountant selected by him will disclose to any person, firm, company, or corporation any information or knowledge which may be obtained from or disclosed in any books and records of Lear, and Adkins further agrees that he and such Certified Public Accountant will treat all of such information and knowledge as confidential. Lear agrees that, on or before the dates above specified for payment of royalties to Adkins, it will deliver to Adkins complete reports showing in detail all items covered by said royalty payments and how the royalties in each case have been computed.

5. SUITS FOR INFRINGEMENT.

In the event that any third party or parties shall institute suit against Lear asserting that the manufacture, sale or use by Lear of products under the licenses herein granted, constitutes an infringement of a patent or patents owned by the plaintiff or plaintiffs in such suit, then Lear shall place in escrow all further royalty payments due or payable to Adkins (including Minimum Royalty Payments) under this Agreement with respect to the license involved, from the time of the institution of such suit until such suit shall be finally terminated. Lear shall have the right but shall not be obligated to defend such suit; and if Lear successfully defends such suit, it shall bear the cost of such defense, but if Lear unsuccessfully defends the suit, then Lear shall be reimbursed from the escrow account by an amount equal to the costs, attorneys, and other fees, judgments and other expenses Lear incurred due to such suit, less the amount it may be awarded and collect from the said plaintiff or plaintiffs, and any residue from the escrow account shall then be paid to Adkins. However, Adkins shall not be required to reimburse Lear beyond the amount of the escrow account at the suit termination for any such costs, fees, and other expenses.

6. INVALID PATENTS

In the event that patent No. 2,542,975, attached hereto as Exhibit "A" is held invalid or in the event the U.S. Patent Office refuses to issue a patent on the substantial claims of the application attached as Exhibit "B", or if such a patent so issued is subsequently held invalid, or in the event an application for U. S. Patent is filed on the inventions contained in Exhibit "C" and the United States Patent Office refuses to issue a patent on the substantial claims therof or if such a patent so issued is subsequently held invalid, then in any of such events Lear at its option shall have the right forthwith to terminate the specific license so affected or to terminate this entire Agreement and no further royalties shall thereupon be payable under the license so terminated or under this Agreement if Lear shall have elected to terminate this Agreement in its entirety.

7. MARKING

Lear agrees to place the required statutory patent notice upon each and every one of said products licensed hereunder.

8. BANKRUPTCY

If Lear shall be declared a bankrupt or insolvent, or make any assignment for the benefit of creditors, or have a receiver appointed, and if such receiver is not removed within 120 days, then such act or event may, at the option of Adkins, be considered as a material breach of this Agreement, and said agreement may thereafter be terminated by Adkins forthwith.

9. PROSECUTION OF PATENT APPLICATIONS.

As part of the consideration for the licenses herein granted, Lear agrees to pay to Adkins $540.00 on execution hereof, to reimburse him for patent costs already incurred by him, and Lear further agrees to pay all costs hereafter incurred for preparation and prosecution of all applications for patents on inventions set forth and disclosed in Exhibits "B" and "C" hereof, provided Adkins has secured the prior written approval of Lear therefor. Adkins agrees with due diligence to file and prosecute applications

for United States letters patent covering all said inventions and shall submit all such applications to Lear for approval prior to the filing thereof. Adkins further agrees that if Lear desires to prepare said patent applications then at Lear's request he will assist Lear in the preparation thereof and will cooperate fully in all matters relating thereto with Lear or its patent counsel and will execute all papers and take all rightful oaths and Adkins shall immediately upon receipt by him, furnish to Lear a copy of each action taken by the U.S. Patent Office with respect to such applications and to consult with Lear before taking any action with respect thereto, and also to notify Lear when a patent or patents have issued.

10. TERMINATION

(a) If Lear shall default in the payment of any minimum or earned royalties hereunder or in the furnishing of any reports required by this Agreement, and shall not cure such default within thirty days after written notice thereof has been given to Lear, or shall breach any other terms of this Agreement and shall not cure such other breach within sixty days after written notice thereof has been given to Lear, then Adkins may, by written notice, terminate this Agreement forthwith after the expiration of said respective thirty-day or sixty-day periods, if any such default is not cured.

(b) Failure to terminate this Agreement for any breach shall not be construed as a waiver of the right so to do for any continuation or repetition of said breach, or any subsequent breach of the same or dissimilar nature.

11. EMPLOYMENT

It is understood that Adkins has been employed by Lear prior to this date and will continue in its employ after this date pursuant to an employment agreement entered into simultaneously herewith. It is further understood that

if hereafter the employment of Adkins shall terminate for any reason whatsoever then in such event this License Agreement shall continue in full force and effect in accordance with all of the terms hereof and subject only to the following additional conditions:

Within fifteen (15) days after the expiration of six full months from the date of termination of the employment of Adkins, Lear shall notify Adkins in writing, that it exercises one of the following four options:

A. To agree that Adkins shall be entitled to receive a minimum royalty at the rate of $15,000.00 annually beginning after the expiration of said six full months from the date of termination of the employment of Adkins, in which event the license herein granted with respect to Exhibit "A" shall continue as a non-exclusive license, and the licenses herein granted with respect to Exhibits "B" and "C", shall continue as exclusive licenses with Lear.

B. To agree that Adkins shall be entitled to receive a minimum royalty at the rate of $10,000.00 annually beginning after the expiration of six full months from the date of termination of the employment of Adkins, in which event the license herein granted with respect to Exhibit "B" shall continue as an exclusive license with Lear, and the licenses granted with respect to Exhibits "A" and "C" shall continue as non-exclusive licenses with Lear.

C. To agree that Adkins shall be entitled to receive a minimum royalty at the rate of $5,000 annually, beginning after the expiration of six full months from the date of termination of the employment of Adkins; in which event the license herein granted with respect to Exhibit "C" shall continue as an exclusive license with Lear, and the licenses granted with respect to Exhibits "A" and "B" shall continue as non-exclusive licenses with Lear.

D. To agree that Adkins shall not be entitled to receive any minimum royalty (except only that provided by paragraph 3 (g)) but rather only actual earned royalties, beginning after the expiration of six full months from the date of termination of the employment of Adkins, in which event the licenses herein granted with respect to Exhibits "A", "B", and "C" shall continue as non-exclusive licenses with Lear.

If Lear exercises option A or option B or option C above, then in such event, if the earned royalties payable for any quarter-annual period thereafter (as the quarter-annual periods are defined in Paragraph 3 hereof) are less than 1/4 of the annual minimum royalties specified in the option which Lear exercises, Lear shall pay the difference between the earned royalties for such quarter-annual period and the amount equal to one-fourth of the said annual minimum royalty; provided however, that excess earned royalties in any previous quarter-annual period shall be applied and carried forward to succeeding quarter-annual periods, and provided further that in determing royalties payable to Adkins for the final October, November, and December quarter-annual period of each calendar year, a readjustment or recomputation shall be made, so that Lear shall receive full credit against the minimum annual royalties for all amounts theretofore paid by Lear in such calendar year, either to cover earned royalties or to cover deficits in royalties for prior quarter-annual periods in such calendar year; and if royalties actually earned by Adkins during any such calendar year exceed the annual minimum royalties, then any excess payments made by Lear during such year, not representing royalties actually earned by Adkins, shall be carried forward and be credited against royalties becoming due for subsequent quarter-annual periods.

In the event Lear shall exercise option A, then within ten days after the end of any quarter-annual period thereafter, Lear shall have the further right and option to notify Adkins, that it cancels the exercise of option A and in lieu thereof, adopts and exercises option B or option C or option D above, beginning with the quarter in which such notice is given. It is further understood that if option B is at any time exercised by Lear, then within ten days after the end of any quarter-annual period thereafter, Lear can by notice in writing to Adkins, cancel the exercise of option B and in lieu thereof adopt and exercise option C or option D beginning with the quarter in which such notice is given. It is further understood that if option C is at any time exercised by Lear, then within ten days after the end of any quarter-annual period thereafter Lear can by notice in writing to Adkins, cancel the exercise of said

option C and in lieu thereof adopt and exercise option D beginning with the quarter in which said notice is given. If, as a result of the exercise of any option by Lear, any license becomes non-exclusive, then in such event Lear cannot thereafter exercise any option which will change such non-exclusive license so that the same would become exclusive, except upon securing the consent of Adkins.

In the event Lear fails to notify Adkins in writing that it exercises one of said options A, B, C or D within fifteen (15) days after expiration of six full months from the date of the termination of the employment of Adkins, then it shall be deemed that option D has been exercised by Lear.

12. PATENT INFRINGEMENT SUIT.

In case Adkins and Lear shall agree that suit shall be commenced against any third party for infringement of any patents, claims or inventions embodied under this Agreement, then all costs and expenses, including counsel fees, incurred in prosecuting such suit shall be borne one-half by each. If such suit shall result in a final award of damages, the net proceeds received as a result of said suit after deducting all costs and other expenses, including counsel fees (for which Adkins and Lear shall be reimbursed) incurred in prosecuting such suit, shall be divided one-half to Lear and one-half to Adkins.

13. PREVIOUS AGREEMENT.

This Agreement cancels and supersedes the Agreement between the parties hereto dated December 29, 1951, and any and all other agreements between the parties hereto, entered into prior to the date hereof and relating to any inventions, discoveries or patents of Adkins or otherwise.

14. NOTICES.

Any notice hereunder must be in writing and shall be given by registered mail, postage prepaid. For the purposes of notices under this Agreement the

the address of Adkins shall be:

468 Twenty-first Street
Santa Monica, California

and the address of Lear shall be:

3171 South Bundy Drive
Santa Monica, California
Attn: Richard M. Mock, President

Either party may, at any time, by thirty days' notice in writing, to the other, designate any other address in place of those specified above.

15. SUCCESSION.

Neither this Agreement nor any of its benefits nor the licenses, rights, or privileges herein granted shall be directly or indirectly, by operation of law or otherwise, assigned, transferred, divided, or shared by Lear without the prior written consent of Adkins. However, this Agreement may be assigned or transferred by Lear to any subsidiary or to any corporation with whom Lear may merge or consolidate or which acquires the major assets or instrument product business of Lear; and this Agreement may be assigned or transferred by Adkins and his heirs and assigns.

16. APPLICABLE LAW.

It is agreed that the laws and decisions of the State of California, wherever applicable, shall be followed in interpreting and deciding any questions arising from this Agreement.

17. LIST OF PRODUCTS.

It is hereby specifically agreed and understood by the parties that on the date of execution hereof the MA-1 compass Lear Model No. 5005, the Directional Steel Gyro Lear Model No. 2152, and the Vertical Steel Gyro Lear Model No. 2153, are the only products manufactured by Lear under the licenses herein granted, which contain any of the inventions or claims described and covered by the respective Exhibits under this Agreement. As and when additional products are manufactured by Lear under the licenses herein granted and which contain any of the inventions or claims described and covered by the respective Exhibits under this Agreement, Lear agrees to so notify Adkins and to identify the

product or item by a model number or identification number, and specify which invention is incorporated or used therein, with respect to the respective Exhibits. Lear shall furnish such list of all items, as aforesaid, to Adkins not later than 30 days after the commencement of the manufacture of any new item incorporating any of the inventions, as aforesaid, provided however, that nothing herein contained shall require Lear to furnish any information to Adkins which Lear is prohibited from disclosing under the terms of any Government contracts.

18. RENEGOTIATION.

This Agreement shall be deemed to be subject to and be deemed to contain all required provisions of the Renegotiation Act of 1951 as it may be amended or extended, or any other Renegotiation or similar Act in effect during the term of this Agreement.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in duplicate on the dates set opposite their respective signatures.

Witness:

Robert H. Bromley

John S. Adkins
JOHN S. ADKINS

LEAR, INCORPORATED

Dwight G. Todd
Secretary

BY Richard M. Mock

Exhibit 10

Jan. 5, 1960 J. S. ADKINS 2,919,586

GYROSCOPE

Filed Feb. 15, 1954 2 Sheets-Sheet 1

Fig. 1

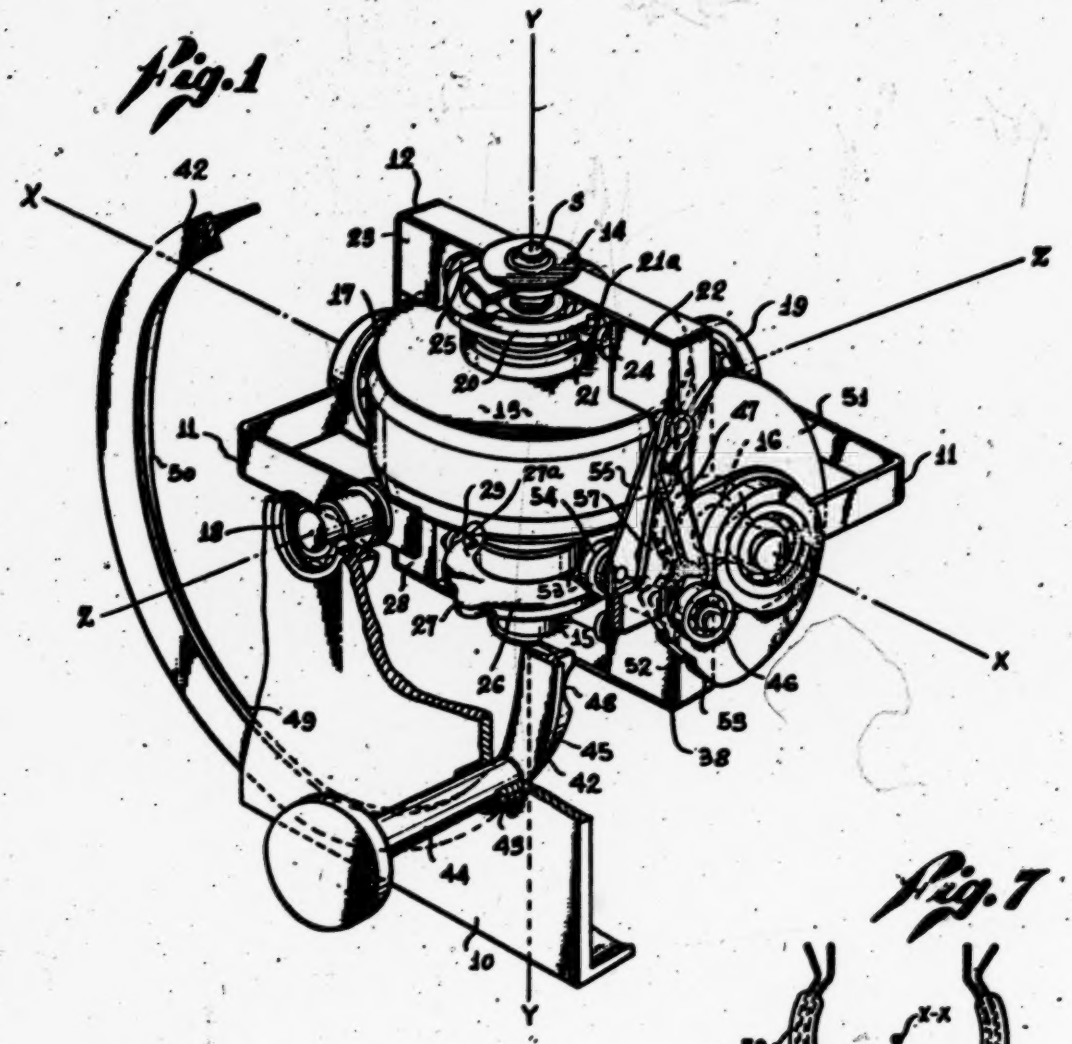
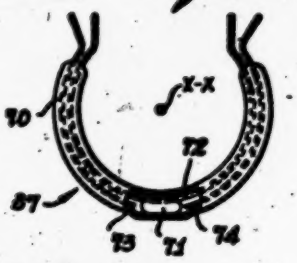


Fig. 7



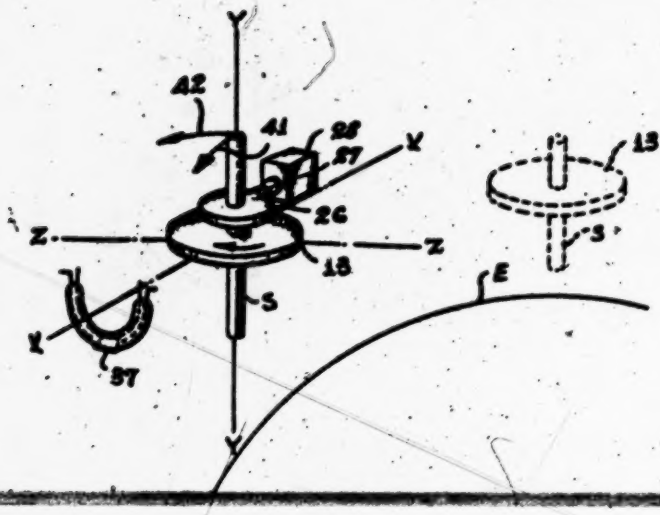


Fig. 4

INVENTOR.
JOHN S. ADKINS
BY Fulwider, Mattingly & Babcock
Attorneys

Jan. 5, 1960 J. S. ADKINS 2,919,586

GYROSCOPE

Filed Feb. 15, 1954 2 Sheets-Sheet 2

Fig. 2

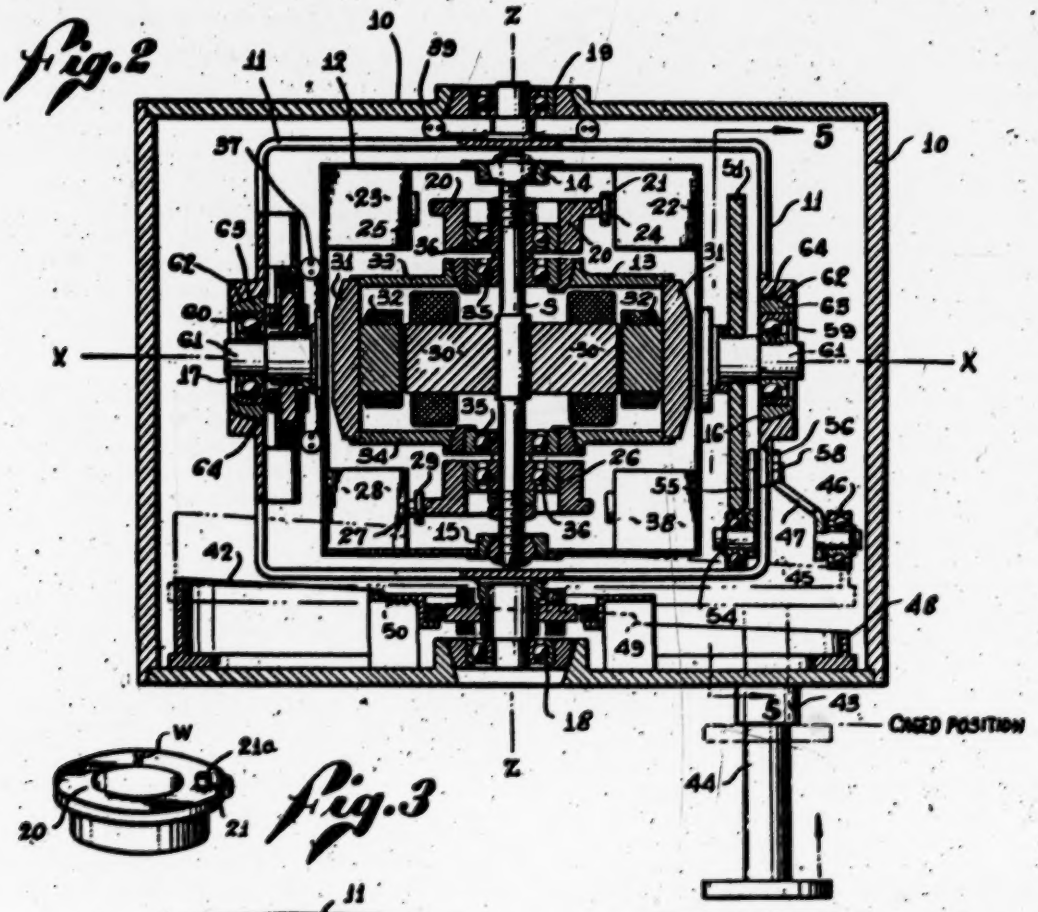


Fig. 3

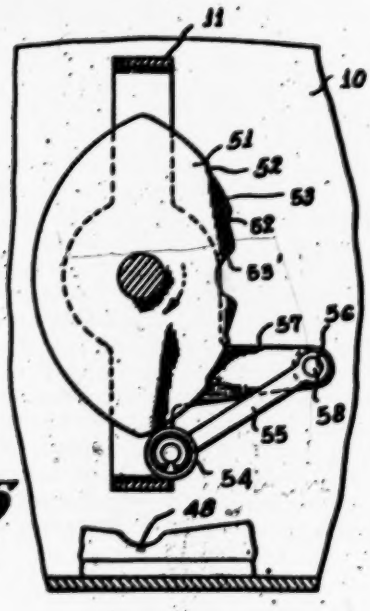


Fig. 5

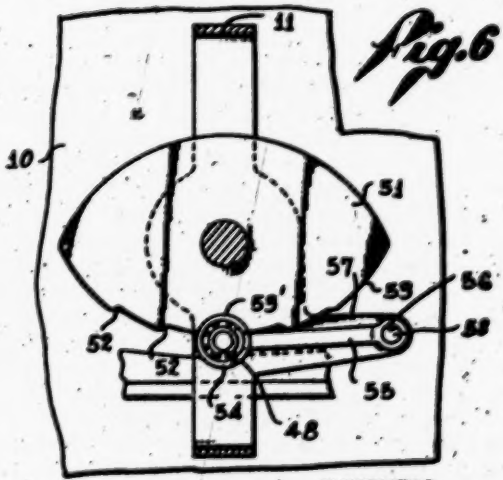


Fig. 6

INVENTOR.
JOHN S. ADKINS
BY Fishwick, Hattaway & Babcock
Attorneys

United States Patent Office

2,919,586

Patented Jan. 5, 1960

2,919,586

GYROSCOPE

John S. Adkins, Santa Monica, Calif.

Application February 15, 1954, Serial No. 410,237

16 Claims. (Cl. 74—5.44)

This invention relates to gyroscopes and more particularly to balanced vertical flight gyroscopes or gyro vertical for use in aircraft and the like. The invention is especially addressed to a novel erecting mechanism well adapted to vertical gyroscopes, and to a novel caging system and method of assembling, applicable to gyroscopes in general.

In vertical gyros employed in aircraft for indicating at any instant the orientation of the craft as to pitch and roll, there is necessarily incorporated a so-called erecting mechanism. The purpose of the erecting mechanism is to maintain the axis of the gyroscope substantially normal to the earth's surface over prolonged periods of flight. Apparent precession, which causes a deviation from the vertical, is a gradual tilting of the gyro axis from the vertical due to the curvature of the earth. This change from a direction initially normal to the earth's surface to an inclined position is due to the tendency of the gyro axis to remain in a fixed direction in space. Therefore, while the aircraft will follow the earth's curvature, the gyro axis will appear to precess, although in reality its direction is fixed. Friction, erroneous erection signals, and other factors also, at times, cause a deviation of the gyro axis from the vertical. In order then, to have a continually accurate indication of a normal to the earth's surface, some sort of vertical erection mechanism must be employed.

Various types of erecting mechanisms have heretofore been used, and one of the most simple is found in a form of construction wherein the lower portion of the gyroscope is made heavier than the upper portion, thereby providing a construction akin to that of a pendulum, from which the gyroscope is termed a pendulous gyroscope. Many other forms of erecting mechanisms have been used, including those in which servo motors are energized to apply a radially directed force to the spin axis of the gyro. In each case, the radially directed force is applied in a direction perpendicular to that of the desired movement of the spin axis, because of the particular properties of gyroscopes, usually known as precession. Thus, if the spin axis of a vertical gyroscope is subjected to a force acting in a north or south direction, the gyroscope and its spin axis will be found to rotate about a horizontal axis, with the spin axis moving in an east or west direction. Since this mode of operation is characteristic of all gyroscopes having three degrees of freedom, erecting mechanisms for such gyroscopes must operate in this manner.

If the gyroscope is of the balanced type, as opposed to the pendulous type, some means must be provided to compare the actual position of the gyroscope to the vertical. Usually this reference takes the form of a gen-

not be allowed to affect the position of the spin axis of the gyro.

One of the primary objects of the present invention accordingly, is to provide a balanced vertical flight gyroscope incorporating a novel erecting means.

Another object is to provide a novel caging mechanism for a gyroscope of this type, for properly orienting the various gimbal mountings of the gyro preparatory to its being used on a prolonged flight or for adjustment purposes during selected periods of its operation. In this connection, the caging system is designed to be operated by a single control which may be either manually or automatically actuated.

A further object of the invention is to provide a novel method of aligning the various bearings in the gimbal mountings, whereby exact coaxial alignment and parallelism between opposed bearings may be achieved.

Insofar as the erecting mechanism is concerned, the invention contemplates the use of unbalanced disc members disposed coaxially with and on opposite sides of the gyro rotor. These discs are caused to rotate by any suitable means. Because the discs are rotating, their unbalancing effect on the gyro axis will cancel out and not interfere with the gyro during normal operation. Additional means are provided operable in response to a gradual tilting of the rotor axis for stopping one or the other of these discs in a selected position depending upon the direction of tilt. The unbalancing effect will then act on the gyro axis to result in a righting force. The arrangement is such that relatively rapid banks or changes in attitude of the aircraft will have a minimum effect as the erection rate will be kept at a very low value.

Another system which is equally satisfactory is the so-called "Hunting System" in which the unbalanced disc is held on one side or the other to constantly erect the gyro about the vertical axis.

The proper initial orientation of the various gimbal mountings is accomplished by a novel caging system employing a ring type cam member secured to the outer housing and adapted to be urged against a roller element secured to an outer gimbal mounting to cause that gimbal to lie in a predetermined plane. This roller is in turn coupled to another roller adapted to be urged against an elongated cam member secured to the innermost gimbal whereby it will simultaneously be oriented in another predetermined plane.

The method of insuring exact coaxial alignment and parallel spacing of the various ball bearings employed in the rotor and gimbals includes the steps of providing annular inserts having peripheral spherically shaped surface portions adapted to be seated against inner conical surfaces provided in the gimbal frames. The ball bearing races are in turn secured to these inserts and the respective surfaces positioned relative to each other with the aid of a suitable jig until the desired alignment is realized. The inserts are then secured in place either mechanically or by cementing and the aligning jig removed. The engaging spherical and conical surfaces permit the bearing race axis to be oriented in any direction during the adjusting period whereby coaxial alignment and parallelism of the bearing races may be easily effected. Other surfaces capable of being aligned and fixed in position such as a sphere in sphere, knife edges or other devices may be used without coming outside the scope of this invention, and the method may be used to align the holder for the inner or outer races, or both.

2,919,586

GYROSCOPE

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16 Claims. (Cl. 74—5.44)

This invention relates to gyroscopes and more particularly to balanced vertical flight gyroscopes or gyro vertical for use in aircraft and the like. The invention is especially addressed to a novel erecting mechanism well adapted to vertical gyroscopes, and to a novel caging system and method of assembling, applicable to gyroscopes in general.

In vertical gyros employed in aircraft for indicating at any instant the orientation of the craft as to pitch and roll, there is necessarily incorporated a so-called erecting mechanism. The purpose of the erecting mechanism is to maintain the axis of the gyroscope substantially normal to the earth's surface over prolonged periods of flight. Apparent precession, which causes a deviation from the vertical, is a gradual tilting of the gyro axis from the vertical due to the curvature of the earth. This change from a direction initially normal to the earth's surface to an inclined position is due to the tendency of the gyro axis to remain in a fixed direction in space. Therefore, while the aircraft will follow the earth's curvature, the gyro axis will appear to precess, although in reality its direction is fixed. Friction, erroneous erection signals, and other factors also, at times, cause a deviation of the gyro axis from the vertical. In order then, to have a continually accurate indication of a normal to the earth's surface, some sort of vertical erection mechanism must be employed.

Various types of erecting mechanisms have heretofore been used, and one of the most simple is found in a form of construction wherein the lower portion of the gyroscope is made heavier than the upper portion, thereby providing a construction akin to that of a pendulum, from which the gyroscope is termed a pendulous gyroscope. Many other forms of erecting mechanisms have been used, including those in which servo motors are energized to apply a radially directed force to the spin axis of the gyro. In each case, the radially directed force is applied in a direction perpendicular to that of the desired movement of the spin axis, because of the particular properties of gyroscopes, usually known as precession. Thus, if the spin axis of a vertical gyroscope is subjected to a force acting in a north or south direction, the gyroscope and its spin axis will be found to rotate about a horizontal axis, with the spin axis moving in an east or west direction. Since this mode of operation is characteristic of all gyroscopes having three degrees of freedom, erecting mechanisms for such gyroscopes must operate in this manner.

If the gyroscope is of the balanced type, as opposed to the pendulous type, some means must be provided to compare the actual position of the gyroscope to the vertical. Usually this reference takes the form of a generally pendulous member, and the pendulum must be designed to keep its swinging or vibration from causing corresponding movement of the gyroscope itself. This is particularly true in the case of gyroscopes intended for use in aircraft, where the centrifugal force developed by turns and the movement of the aircraft in general must

One of the primary objects of the present invention accordingly, is to provide a balanced vertical flight gyroscope incorporating a novel erecting means.

Another object is to provide a novel caging mechanism for a gyroscope of this type, for properly orienting the various gimbal mountings of the gyro preparatory to its being used on a prolonged flight or for adjustment purposes during selected periods of its operation. In this connection, the caging system is designed to be operated by a single control which may be either manually or automatically actuated.

A further object of the invention is to provide a novel method of aligning the various bearings in the gimbal mountings, whereby exact coaxial alignment and parallelism between opposed bearings may be achieved.

Insofar as the erecting mechanism is concerned, the invention contemplates the use of unbalanced disc members disposed coaxially with and on opposite sides of the gyro rotor. These discs are caused to rotate by any suitable means. Because the discs are rotating, their unbalancing effect on the gyro axis will cancel out and not interfere with the gyro during normal operation. Additional means are provided operable in response to a gradual tilting of the rotor axis for stopping one or the other of these discs in a selected position depending upon the direction of tilt. The unbalancing effect will then act on the gyro axis to result in a righting force. The arrangement is such that relatively rapid banks or changes in attitude of the aircraft will have a minimum effect as the erection rate will be kept at a very low value.

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The method of insuring exact coaxial alignment and parallel spacing of the various ball bearings employed in the rotor and gimbals includes the steps of providing annular inserts having peripheral spherically shaped surface portions adapted to be seated against inner conical surfaces provided in the gimbal frames. The ball bearing races are in turn secured to these inserts and the respective surfaces positioned relative to each other with the aid of a suitable jig until the desired alignment is realized. The inserts are then secured in place either mechanically or by cementing and the aligning jig removed. The engaging spherical and conical surfaces permit the bearing race axis to be oriented in any direction during the adjusting period whereby coaxial alignment and parallelism of the bearing races may be easily effected. Other surfaces capable of being aligned and fixed in position such as a sphere in sphere, knife edges or other devices may be used without coming outside the scope of this invention, and the method may be used to align the holder for the inner or outer races, or both.

A better understanding of the various features of the present invention will be had by referring to the accompanying drawings in which:

Figure 1 is a schematic perspective view partly broken away to illustrate the relative relationships of the gyro components in accordance with the invention;

Figure 2 is an elevational cross-sectional view of a preferred construction of the gyroscope in which the various gimbal mountings are all co-planar for purposes of illustration;

Figure 3 is a perspective view of the unbalanced cup-like disc employed in the erecting mechanism;

Figure 4 is a schematic force diagram useful in explaining the operation of the erecting mechanism;

Figure 5 is a cross-sectional view as seen along the line 5—5 of Figure 2;

Figure 6 is a view similar to Figure 5 showing the orientation of certain components when the gyroscope is in caged position; and

Figure 7 is an elevational view of the form of switch I prefer to use in the operation of my novel erecting system.

Referring now to Figure 1, the basic elements of a gyroscope incorporating the various features of the present invention are shown. This gyroscope is mounted for three degrees of freedom respectively, about three mutually perpendicular axes. These axes are shown in Figure 1 as a horizontal pitch axis X—X, a vertical gyro spin axis Y—Y, and a horizontal roll axis Z—Z. To accomplish the mounting, there is provided an outer fixed support 10 which may be secured to the gyroscope housing, an outer gimbal 11 rotatably mounted on the fixed support, and an inner gimbal 12 rotatably mounted on the outer gimbal and serving to support the gyroscope rotor designated generally by numeral 13.

As shown in Figure 1, the rotor 13 includes a shaft S supported about the vertical or Y—Y axis by means of an upper holder 14 and a lower holder 15 fixed to the inner gimbal frame 12. The inner gimbal frame 12 itself is mounted for rotation about the horizontal pitch axis X—X by means of journal bearings 16 and 17 fixed to the outer gimbal 11. Finally, the outer gimbal frame 11 is mounted for rotation about the horizontal roll axis Z—Z by means of journal bearings 18 and 19 in the outer fixed support 10. With this arrangement, it will be seen that the outer fixed support 10 and housing for the gyroscope may be turned in any manner without changing the direction of the rotor axis which tends to stay fixed in space when the rotor is in motion.

As previously explained, it is necessary to incorporate in a gyroscope mounted in the same manner, some means in the form of an erecting mechanism for maintaining the rotor axis normal to the surface of the earth when the gyro is moved over great distances. This is accomplished in the present invention by applying a small force to the axis of the rotor at right angles to the direction it is desired to move the same to keep it normal to the earth's surface. Due to the properties of the gyroscope such a force at right angles results in a movement of the rotor axis in the desired direction.

In Figure 1 there is shown a preferred type of erecting mechanism for the gyroscope. This mechanism comprises a cup-shaped disc 20 coaxial with the rotor shaft S. This disc is adapted to be rotated and includes at one point on its periphery a small weight serving to unbalance the disc. A projection or stop 21 extends from the edge of the disc, and the weight, such as a slug 21*a*, may be aligned with the projection or circumferentially displaced therefrom, to be located, for example, at the point W.

Disposed on opposite sides of the disc within the gimbal 12 are solenoids 22 and 23, respectively, arranged to cause their associated plungers 24 and 25 to project towards the disc and engage the projection 21. This action will cause the disc 20 to stop rotating with its projection 21 in line with the horizontal pitch axis X—X, thereby applying a tilting force to the rotor shaft S due to the unbalancing effect of the weight 21*a* tending to rotate the gyro axis about the horizontal roll Z—Z axis.

A similar cup-shaped unbalanced disc 26 is coaxially disposed below the rotor 13 and is provided with a similar projection 27. A solenoid 28 having a plunger 29 for stopping the projection 27 in a position such that the unbalance weight 27*a* is in line with the horizontal roll axis Z—Z, and is mounted on the gimbal frame 12 at its lower end as shown. The unbalancing effect of the disc 26 when stop 27 is in line with the Z—Z axis tends to cause the gyro axis to rotate about the X—X axis. A similar solenoid plunger is provided in the diametrically opposite position with respect to disc 26.

In Figure 2 the gyroscope is shown in greater detail, the same reference numerals being employed as in Figure 1 to designate the corresponding components. The positioning of the gimbal mountings as shown in Figure 2 would be their position as seen looking at the gyro in Figure 1 in the direction of the vertical Y—Y axis, the inner gimbal mounting 12 being rotated about the horizontal X—X axis to lie in the X—Z plane.

Referring to Figure 2, a preferred form of construction of the gyroscope is illustrated. As shown, the actual construction of the rotor 13 is that of an inside-out motor. Located around the rotor shaft S are stationary field windings 30 which are connected to a source of electrical power by suitable conductors (not shown) whereby a rapidly rotating magnetic field is established. The rotor 13 is in the form of a cylindrical box structure housing the field windings 30 with the annular cylindrical portion 31 supporting squirrel cage 32 adjacent the stationary field windings 30. As shown, there are provided circular top and bottom plates 33 and 34 closing the ends of the cylindrical portion 31 and supporting the rotor for rotation about shaft S as by ball bearings 35. The interaction between the magnetic fields of the squirrel cage and field windings, respectively, causes rotation of the rotor structure about the shaft S and field windings 30. The unbalanced discs 20 and 26 are shown mounted for free rotation about the shaft S by ball bearings 36.

One means for causing rotation of the cup-shaped discs 20 and 26 about shaft S is to make these unbalanced discs of magnetic material and employ suitable metal parts in the rotor construction, such as the plates 33 and 34 whereby the discs will be dragged round the shaft S with the rotor 13 by drag cup action. Other simple means may be employed such as a frictional drag means, for example.

In order to actuate the solenoid plungers 24 and 25 to stop the disc 20 in a desired position, there is provided a mercury type gravity switch 37 shown in alignment with the horizontal X—X axis in Figure 2 and arranged to close a circuit in the solenoids 22 or 23 through a globule of mercury when tilted in one direction or the other. In the particular construction shown, for example, rotation of inner gimbal 12, and consequently of the mercury switch 37 about the X—X axis will operate the solenoid 22 or the solenoid 23, depending upon whether the tilting is clockwise or counterclockwise, to maintain unbalanced disc 20 in the position to properly erect the gyro.

To operate the lower solenoid 28 and its oppositely disposed solenoid 38, there is provided a further mercury switch 39 shown disposed at right angles to the mercury switch 37, whereby rotation of the outer gimbal 11 about the Z—Z axis will cause operation of either the solenoid 28 or the solenoid 38 to maintain unbalanced disc 26 in the position to properly erect the gyro.

In Figure 7 I have shown a form of switch that I prefer to use to operate the solenoids 22, 23, 28 and 38. As shown in that figure, the switch 37, for example, includes a generally tubular member 70 of insulating material such as glass, formed into an arc of a circle. The center of this circle is concentric with the associated gimbal axis, such as the axis X—X, so that balance and sensitivity problems are minimized. Located within the tubular member 70 is a globule of mercury 71 that is always in electrical contact with a common conductor 72, while the globule may make contact with either of two other conductors 73 and 74, located on opposite sides of

the center of the arc of the tubular member 70. Adjacent the center of the arc, the bottom or radially outward portion of the tubular member 70 is somewhat flattened, so that a very slight movement of the tubular member will cause the globule of mercury 71 to move to one side or the other to complete a circuit through conductor 73 or 74 to the corresponding one of the solenoids 22 or 23. In this manner, extreme sensitivity of the switch is secured, while unbalance of the mechanical portions of the gyroscope is kept to a minimum at all times.

Figure 3 shows an enlarged perspective view of the disc 20 clearly showing projection 21 and the positions of unbalance weights 21*a* and 27*a* for discs 20 and 26, respectively.

Operation of the erecting mechanism

Referring again to Figure 1 and the diagram shown in Figure 4, assume that the gyroscope is mounted in the nose of an aircraft traveling from east to west in the direction of the horizontal Z—Z axis. As shown in Figure 4, when the rotor axis is normal to the surface of the earth E, as shown in phantom lines, the proper vertical normal to the earth's surface will be indicated by the gyro regardless of the motion of the aircraft. However, after the aircraft has traveled over a considerable distance in the direction of the horizontal Z—Z axis, the gyro axis will assume a tilting angle with respect to the surface E as indicated by the solid line representation of the gyroscope. This apparent tilting is due to the fact that the gyro axis tends to remain fixed relative to space.

Since the force of gravity is always in a direction normal to the surface of the earth, the globule of mercury 71 in the gravity switch 37 will close the right hand contacts causing actuation of the solenoid 23 thereby stopping the upper cup-shaped disc 20 with its unbalancing weight 21*a* in line with the X—X axis. The effect of this unbalanced disc is to exert a tilting force on the gyro axis tending to rotate it about the Z—Z axis as indicated by the arrow 41. Due to the characteristics of the rapidly rotating gyroscope, this force results in a resultant motion acting at right angles on the rotor axis as indicated by tht arrow 42, this force being in a direction to align the rotor axis again in a direction normal to the surface of the earth E.

After the axis has been righted, the mercury globule 71 in the switch 37 will return to its center position thereby opening the right hand contacts and permitting retraction of the plunger 25 in solenoid 23 to permit the cup-shaped unbalanced disc 20 to resume rotation.

When the gyroscope is tipped to a position with one side lower than the other, i.e., rotated about the Z—Z axis, a similar action tending to right the gyroscope axis is effected by the gravity switch 39, solenoids 28 and 38, and the unbalanced cup-shaped disc 26. When the gyroscope is moved to positions intermediate those mentioned, both gravity type switches are free to operate to stop the discs 20 and 26 with their weights 21*a* and 27*a*, respectively, at 90° to each other resulting in a net unbalancing force on the gyroscope axis tending to rotate it about a suitable axis intermediate the X—X and Z—Z axes. Thus, it is seen that the switches are akin to a pendulous type control for the erecting mechanism.

It is to be understood, of course, that the gravity type switches 37 and 39 are extremely sensitive to slight variations of the rotor axis from the exact normal. These switches therefore could be easily operated by normal turning of the aircraft or changes in its attitude. Stopping of the unbalanced disc for such a relatively short period of time, however, will not affect appreciably the disposition of the gyro axis. In other words, the erecting mechanism has a relatively long time constant and to be effective it is necessary that the discs be stopped for an appreciable period, far longer than the time taken to execute the usual turns or changes in attitude of the aircraft.

It is possible to operate my improved gyroscope with a "hunting" type of erection system. In such a system the cup 20, for example, instead of continually rotating, is normally held with its weight 21*a* at one side or the other. This causes an unbalance, which acts to tip the gyro and operate the switch 37. Thus, if solenoid 22 has been energized to hold the disc 20, when the gyro has tipped, solenoid 22 is de-energized. Thereupon, either by a mechanical connection or by electrical means, the plunger 25 of solenoid 23 is extended to engage the projection 21 of the cup, thereby unbalancing the gyro in the opposite direction, and causing it to erect. The process continues all the time the gyro is operating, and consequently the gyro "hunts" back and forth across the true vertical.

Construction of caging means

Referring again to Figures 1 and 2, in order to insure that the inner and outer gimbal mountings and the frame 12, 11, and 10 are initially properly caged in mutually perpendicular planes, there is included a novel caging mechanism comprising a ring cam member 42 slidably secured to the frame 10 or housing for the gyro as at 43, and adapted to be moved in the direction of the Z—Z axis by means of a plunger member 44. As shown, the ring cam has a tapering width in the direction of the Z—Z axis, the inner facing surface of the ring 45 being adapted to engage a roller 46 secured to an arm 47 in turn rotatably mounted to the intermediate gimbal frame 11. Roller 46 is adapted to ride on this camming surface 45 of the ring cam when the gimbal frame 11 is rotating about the Z—Z axis, the roller 46 falling into a small groove 48 at the point of minimum width of the ring cam, when the gimbal 11 is perpendicular to the outer frame 10. This roller is effectively prevented from backtracking on the ring cam surface 45 by means of cam steps 49 and 50.

The caging mechanism also includes an elongated elliptically shaped cam 51 secured to the inner gimbal 12 and including steps 52 on its peripheral camming surface 53 adapted to engage a second roller 54 on the end of an arm 55. In properly caged position, roller 54 will seat in the grove 53' in camming surface 53. Arm 55 is coupled to the arm 47 through an opening 56 offset by a projecting portion 57 on gimbal mounting 11 as clearly shown in Figure 5. The two rollers 46 and 54 are thus adapted to move back and forth in small arcuate movements approximately in the direction of the Z—Z axis by swinging about a pivotal mounting 58 in opening 56. The camming surface 53 of the elongated cam 51 is such as to orient the inner gimbal mounting 12 in a plane perpendicular to the planes of gimbal 11 and frame 10. The properly caged position for the gyroscope is as shown in Figure 1. After this orientation has been effected, the plunger 44 may be retracted leaving the gimbals free to rotate.

The arrangement of the ring caging cam member 42 and operating plunger 44 is shown clearly in Figure 2. Front views of the elongated cam member 51 in uncaged and caged position, as seen along the line 5—5 of Figure 2, are shown in Figures 5 and 6, respectively.

Operation of the caging mechanism

In the operation of the caging mechanism, as shown in Figure 2, assume that outer gimbal 11 is rotated about the Z—Z axis 180° to bring the roller element 46 into engagement with the camming surface 45 of the ring cam 42. Urging of the ring cam 42 against the roller 46 by means of the plunger 44 will cause the roller to move down the sloping surface 45 past the first step 50. This camming action will continue moving the roller on down the cam past the step 49 to eventually lodge in the groove 48. As already explained, the steps 50 and 49 effectively prevent any backtracking of the roller 46 in the event the gyroscope is subject to sudden motions. As also ex-

plained, the caged position of the other gimbal 11 is actually in the Y—Z plane as shown in Figure 1.

Simultaneously with the above described action of the ring cam member, the roller element 54, which is coupled to the roller element 46 through the arm 55, the pivot axis 58, and arm 47, will be urged against the elongated cam 51. This initial engagement is shown in Figure 5. As the plunger 44 is moved inwardly further, the roller 54 will cam the member 51 in a clockwise direction as seen in Figure 5 to the position shown in Figure 6, the roller 54 being seated in the groove 53' as shown. The cam 51 also includes steps 52 effectively preventing any backtracking of the roller 54. This action will swing the inner gimbal mounting 12 about the horizontal X—X axis to bring the rotor axis into alignment with the vertical or Y—Y axis.

It is thus seen that by a simple manual movement of the plunger 44, the gimbal mountings may be properly caged in mutually perpendicular planes. The plunger 44 may be either manually operated or automatically operated as desired.

Bearing alignment

Referring once again to Figure 2, a feature of the present invention contemplates a novel method for insuring precise coaxial alignment of the various bearings journaling the gimbal and rotor shafts. As an example, the bearings 59 and 60 shown secured to opposite sides of gimbal mounting 11 in Figure 2, must be coaxial with respect to each other and lie in parallel planes in order that the inner gimbal mounting shafts 61 will be supported for minimum bearing friction.

In accordance with the method, the inner annular surfaces 62 of the sockets in the intermediate gimbal mounting 11 are of a conical shape. The bearings 59 and 60 are in turn secured to insert elements 63 each having an annular peripheral surface 64 of the shape of a portion of a sphere, adapted to seat against the conical surface 62. During the initial adjustments, a suitable jig supports the bearings 59 and 60 and attached inserts 63. Because of the conical shape of the surface 62 and the spherical shape of the peripheral surface 64 of the inserts, the axis of each bearing may be properly oriented by a rotating motion applied to the race. This latter motion can be easily accommodated by the engaging surfaces in view of their different curved shapes. It is thus possible to align precisely the two bearings by means of a jig, at which moment the inserts 63 are secured to the gimbal mounting sockets as by cementing, welding, soldering, or by screws, for example. The aligning jig may then be removed and the assembly of the gyroscope completed. The same method may be employed for mouting the rotor 13 on the shaft S and for aligning the bearings in the outer gimbal 10 journalling the inner gimbal 11.

The jig used in aligning the bearings may be very simple and in one form takes the shape of a cylindrical rod upon which the bearings are slid preparatory to mounting in their supports. The rod is, of course, accurately formed to be round, without taper, and straight, and held to these conditions within extremely small tolerances. While such a jig requires precision work, it is comparatively simple to secure such a rod and maintain it within the required tolerances. Previous methods of construction have required the use of precision boring jigs to bore accurately aligned and concentric holes to receive the bearings, and such a jig is both difficult and expensive to fabricate, and easy to get out of adjustment.

The above described method and means insures that bearings are properly aligned upon being placed in the inserts, and this is so whether they are the original bearings or replacement bearings. After aligning and fixing the inserts 63 to the frame, bearings can readily be removed from and inserted therein, with complete assurance that the bearings are properly positioned when so inserted. All that is required to remove a bearing is to tap it and remove it from the insert; a new bearing is easily and quickly installed by tapping it into the insert. The inserts, being properly aligned, initially, maintain their alignment permanently. This arrangement contrasts sharply with prior art bearing alignment means and procedures, which involve securing the outer portion of the bearing to the frame. To replace bearings in such arrangements, the connection between the bearing and frame is broken so that it can be removed. Since new bearings when positioned are not connected to the frame, the entire alignment procedure must be carried out before they can be secured in place.

Alignment of bearings as heretofore practiced involves considerable care, time and expense, and requires the services of a skilled worker. But with the bearing alignment method and means of my invention, bearings can be replaced in a minimum of time by an unskilled mechanic, and with complete assurance that the bearings, upon being inserted in the inserts 63, are completely and accurately aligned.

While the use of mating conical and spherical surfaces has been mentioned, it is apparent that other similarly cooperating surfaces can be used. For example, a spherical surface can be used within another spherical surface, and other combinations can be employed. Similarly, the inner race of a bearing may be aligned with its holder, or both the inner and outer races may be aligned with their respective holders. Further, not only may the confronting surfaces (of the inserts 63 and the walls of the openings in which they are oriented) be of any desired configuration, my invention also is not limited to the alignment of bearings of a gyroscope. My method and means for bearing alignment is applicable for insuring alignment of bearings for any rotatable device, e.g., motor shafts, etc." Further, the invention is not restricted as to the type of bearing employed; for example, it is readily suited to insure proper automatic alignment of either ball bearings or sleeve bearings.

It will be apparent from the foregoing that there has been provided a greatly improved balanced type gyroscope incorporating a novel erecting means, and in which the caging of the gyro can be easily effected by a single movement of a plunger control. The novel method of bearing alignment results in a tremendous simplification in the manufacture of the gyroscope.

Modifications employing the principles of the present invention will occur to those skilled in the art. While a preferred form has been shown and described, it is to be understood that the invention is not to be restricted to the particular form and arrangement of parts herein described and shown, except as limited by the following claims.

I claim:

1. In an erecting mechanism for a gyroscope including a rotor member and a gimbal rotatably mounting the rotor, the combination comprising: an unbalanced disc element coaxial with said rotor; means for continuously rotating the disc at a relatively low speed; means secured to the gimbal for stopping the rotation of the disc in a selected position, whereby the unbalanced weight of said disc causes the precession of said rotor; and means responsive to a tilting of the rotor axis from a position normal to the earth's surface for actuating said disc stopping means.

2. In a vertical flight gyroscope including a rotor, an inner gimbal rotably mounting the rotor, an outer gimbal mounting the inner gimbal for rotation about an axis perpendicular to the rotor axis, and a frame mounting the outer gimbal for rotation about an axis perpendicular to the axis of rotation of the inner gimbal, an erecting mechanism for maintaining the rotor axis normal to the surface of the earth comprising: an unbalanced disc member coaxial with said rotor; means for continuously rotating said disc at a relatively low speed; and means secured to said inner gimbal for stopping the rotation of the disc in a selected position in response to a gradual tilting beyond a predetermined amount of

the rotor axis away from said normal, whereby a correcting torque acts on the rotor axis due to the unbalanced weight of said unbalanced disc to bring the axis back to its normal position.

3. The subject matter of claim 2, in which said means for stopping the rotation of the disc comprises a solenoid operated stop member having a plunger adapted to engage the edge of said disc and a gravity operated switch for actuating the solenoid.

4. In a gyroscope including a rotor, an inner gimbal rotatably mounting the rotor, an outer gimbal rotatably mounting the inner gimbal, and a frame rotatably mounting the outer gimbal, a caging mechanism for orienting said gimbals in mutually perpendicular planes comprising: a first cam member having a series of unidirectional stop members thereon and slidably secured to the frame; roller means movably secured to the outer gimbal adapted to be engaged by sliding movement of said first cam member; and a second cam member having a second series of unidirectional stop members thereon and rigidly secured to the inner gimbal adapted to be engaged by said roller means.

5. In a gyroscope including a rotor, an inner gimbal rotatably mounting the rotor, an outer gimbal mounting the inner gimbal for rotation about an axis perpendicular to the rotor axis, and a frame mounting the outer gimbal for rotation about an axis perpendicular to the axis of rotation of the outer gimbal, a caging mechanism for orienting said gimbals in mutually perpendicular planes comprising: a ring cam member slidably secured to the frame having a varying width dimension in the direction of the axis of rotation of the outer gimbal and having a series of unidirectional stop means thereon; a first roller secured to the outer gimbal offset from said outer gimbal axis and adapted to be engaged by sliding movement of the ring cam; and elongated cam member secured to the mounting shaft of said inner gimbal and having a second series of unidirectional stop means thereon; and a second roller coupled to the first roller and adapted to bear against the elongated cam member, whereby slidably urging the ring cam against the first roller, cams the outer gimbal into a plane perpendicular to the frame, and urging of the second roller against the elongated cam member cams the inner gimbal into a plane perpendicular to the outer gimbal.

6. The subject matter of claim 5, in which the series of unidirectional stop means on the ring cam surface and the alongated cam surface include graded steps acting to prevent the engaging rollers from retrogressing and moving away from the low point of said cam surfaces.

7. In a gyroscope including a rotor, an inner gimbal rotatably mounting the rotor, an outer gimbal mounting the inner gimbal for rotation about an axis perpendicular to the rotor axis, and a frame mounting the outer gimbal for rotation about an axis perpendicular to the axis of rotation of the outer gimbal, the combination comprising: a first cam member having a series of unidirectional stop means thereon and movably secured to the frame; a second cam member having a second series of unidirectional stop means thereon and rigidly secured to the inner gimbal; a cam roller means movably secured to the outer gimbal; means for moving the first cam member into engagement with the roller means whereby the roller means will be urged against the second cam member, the inner and outer gimbals being cammed into mutually perpendicular planes with respect to each other and said frame; means for retracting the first cam member to free the gimbals; a continuously rotating unbalanced disc coaxial with the rotor and rotating at a relatively low speed; and means secured to said inner gimbal responsive to tilting of the rotor axis for stopping said disc in a selected position.

8. A gyroscope comprising inner and outer gimbals and frame for mounting a rotor element with three degrees of freedom; an unbalanced disc having its axis substantially coinciding at all times with the axis of the rotor; means for continuously rotating the disc in response to rotation of the rotor and at a relatively slow speed; means on the inner gimbal for stopping rotation of the disc in a selected position operative in response to a tilting of the rotor axis from a direction normal to the surface of the earth; a ring cam member slidably secured to the frame; roller means movably secured to the outer gimbal adapted to be engaged by sliding movement of the ring cam member; an elongated cam rigidly secured to the inner gimbal adapted to be engaged by said roller means on each of said cam member preventing movement of said roller away from the low points of said cam members.

9. An apparatus for supporting bearings in aligned relationship which comprises a pair of bearing-receiving elements each providing means to removably support a bearing in a fixed relationship with said element, each of said bearing-receiving elements having a mounting surface by which it may be supported, means for supporting said bearing-receiving elements at opposed relatively spaced positions, said supporting means providing supporting surfaces generally corresponding to said mounting surfaces and permitting said elements to be initially adjustably shifted relative to said supporting means into oriented positions where said bearing-supporting means are in alignment with each other, and means to retain said bearing-receiving elements in said oriented positions to permit pairs of bearings to be interchangeably mounted in aligned relationship supported by said bearing supporting means.

10. An apparatus as recited in claim 9 wherein the mounting surfaces of said bearing-receiving elements are mounted in contact with said supporting surfaces.

11. An apparatus as recited in claim 9 wherein said supporting surfaces define openings in said supporting means and said bearing-receiving elements are positioned in said openings.

12. An apparatus as recited in claim 11 wherein said supporting surfaces and said mounting surfaces are so formed that said bearing-receiving elements may be inserted in but are restrained against passing through said openings.

13. An apparatus as recited in claim 9 wherein said retaining means permanently and immovably retain said bearing-receiving elements in said oriented positions.

14. An apparatus as recited in claim 13 wherein said retaining means comprise cementing means.

15. An apparatus as recited in claim 9 wherein said mounting and supporting surfaces are cooperating convex and concave surfaces and each of said surfaces is a surface of revolution generated by a curved generatrix.

16. An apparatus as recited in claim 9 further comprising a pair of frictionless bearings supported by said bearing-receiving elements in said fixed relationship with respect thereto.

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UNITED STATES PATENT OFFICE

CERTIFICATE OF CORRECTION

Patent No. 2,919,586 January 5, 1960

John S. Adkins

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 9, line 36, for "and elongated" read -- an elongated --; column 10, line 10, after "means" insert -- ; and means --.

Signed and sealed this 28th day of June 1960.

(SEAL)
Attest:

KARL H. AXLINE
Attesting Officer

ROBERT C. WATSON
Commissioner of Patents

Exhibit 39

April 8, 1959

Mr. John S. Adkins
468 Twenty-first Street
Santa Monica, California

Dear Mr. Adkins:

Reference is made to License Agreement between you and Lear, Incorporated dated the 15th day of September, 1955.

Pursuant to its rights of termination as contained in said agreement, including but not limited to Paragraphs 2(a) and 6 thereof, Lear, Incorporated hereby exercises its rights and options to terminate the agreement and the licenses therein granted.

Very truly yours,

Richard M. Mock,
President

RMM:tb
cc: Fulwider, Mattingly & Huntley

Registered Mail

Exhibit 72.

"Upon stipulation of the parties, it is agreed that Ex. 72 cannot be readily reproduced and reduced in size. Consequently, the Court's attention is directed to the original exhibit which is included in the record before this Court."

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SEAL DIVISION

LAW OFFICES
FULWIDER, MATTINGLY & BABCOCK
PATENT, TRADE MARK AND COPYRIGHT CAUSES
5225 WILSHIRE BOULEVARD
LOS ANGELES 36
WALNUT 1265

February 10, 1954

Hon. Commissioner of Patents
Washington 25, D. C.

Sir:

Enclosed please find our check in the amount of $30.00 to cover the cost of filing the enclosed patent application:

Inventor: JOHN S. ADKINS

Invention: GYROSCOPE

Drawings: Two

Docket No.: 2555

Respectfully,
FULWIDER, MATTINGLY & BABCOCK

By Warren L. Patton

RFW/bd
Enclosures
WLP/aj

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Exhibit 36

September 10, 1957

Mr. John S. Adkins
468 Twenty-First Street
Santa Monica, California

Dear Mr. Adkins:

With reference to the license agreement entered into between you and Lear, Incorporated on or about September 15, 1955, we wish to inform you that we have reviewed your patent application (Exhibit B to the agreement) and conclude that it does not disclose any inventions utilized in any Lear equipment except the MA-1 system and certain components thereof. Specifically, we do not believe that any models of the so-called Steel Gyro come within the scope of Exhibit B.

We have made a search of the U.S. Patent Office files and believe that the method of bearing alignment heretofore and currently used in assembling the Lear Steel gyroscopes is not patentable. A copy of Grenat patent No. 2,531,334 found in that search was delivered to you on January 8, 1957.

Accordingly, we are preparing a revised statement of royalties paid under the agreement, as of June 30, 1957. A preliminary check indicates that if Lear, Incorporated takes credit for sums heretofore paid to you in error, the statement will show an over-payment as of June 30, 1957. We expect this statement to be completed in a very few days and would like you to check the computations that will be contained therein and report to us promptly if you believe them to be in error in any respect.

We should also like to renew our invitation to you and your counsel to meet with us at any time convenient to you to discuss prosecution of your patent application Exhibit B and any other matters of mutual interest under the agreement.

Very truly yours,

LEAR, INCORPORATED

H. J. Downes
Chief Patent Counsel

HJD:trb
cc: P. E. Golde

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This invention relates to gyroscopes and more particularly to balanced vertical flight gyroscopes or gyro vertical for use in aircraft and the like. The invention is especially addressed to a novel erecting mechanism well adapted to vertical gyroscopes, and to a novel caging system and method of assembling, applicable to gyroscopes in general.

In vertical gyros employed in aircraft for indicating at any instant the orientation of the craft as to pitch and roll, there is necessarily incorporated a so-called erecting mechanism. The purpose of the erecting mechanism is to maintain the axis of the gyroscope substantially normal to the earth's surface over prolonged periods of flight. Apparent precession, which causes a deviation from the vertical, is a gradual tilting

Exhibit P

NUMBER Series of 1948

411927

DIV 1/2

PATENT NO. 2919586

DATED JAN 5 1960

JOHN [illegible] ADKINS

SANTA MONICA

CALIFORNIA

GYROSCOPE

ORIGINAL

APPLICATION FILED COMPLETE FEB 15 1954

FEB 15 1954

Patent No. Granted 74-Stat 44

This is to certify that annexed hereto is a true copy from the records of the United States Patent Office of File Wrapper and Contents of the file identified above.

By authority of the
COMMISSIONER OF PATENTS

J P Alvarez

Certifying Officer

Date April 26, 1960

LODGED

MAR 27 1963

CLERK, U. S. DISTRICT COURT
SOUTHERN DISTRICT OF CALIFORNIA

NUMBER Series of 1948

PATENT NO. 2919586

410237

DATED JAN 5 1960

DIV. /2

JOHN S. ADKINS

SANTA MONICA,

CALIFORNIA,

GYROSCOPE

ORIGINAL

APPLICATION FILED COMPLETE

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Division of Appl. No. , filed , 19 Patent No. , Granted

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to be operated by a single control which may be either manually or automatically actuated.

A further object of the invention is to provide a novel method of aligning the various bearings in the gimbal mountings, whereby exact coaxial alignment and parallelism between opposed bearings may be achieved.

Insofar as the erecting mechanism is concerned, the invention contemplates the use of unbalanced disc members disposed coaxially with and on opposite sides of the gyro rotor. These discs are caused to rotate by any suitable means. Because the discs are rotating, their unbalancing effect on the gyro axis will cancel out and not interfere with the gyro during normal operation. Additional means are provided operable in response to a gradual tilting of the rotor axis for stopping one or the other of these discs in a selected position depending upon the direction of tilt. The unbalancing effect will then act on the gyro axis to result in a righting force. The arrangement is such that relatively rapid banks or changes in attitude of the aircraft will have a minimum effect as the erection rate will be kept at a very low value.

Another system which is equally satisfactory is the so-called "Hunting System" in which the unbalanced disc is held on one side or the other to constantly erect the gyro about the vertical axis.

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The proper initial orientation of the various gimbal mountings is accomplished by a novel caging system employing a ring type cam member secured to the outer housing and adapted to be urged against a roller element secured to an outer gimbal mounting to cause that gimbal to lie in a predetermined plane. This roller is in turn coupled to another roller adapted to be urged against an elongated cam member secured to the innermost gimbal whereby it will simultaneously be oriented in another predetermined plane.

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The method of insuring exact coaxial alignment and parallel spacing of the various ball bearings employed in the rotor and gimbals includes the steps of providing annular inserts having peripheral spherically shaped surface portions adapted to be seated against inner conical surfaces provided in the gimbal frames. The ball bearing races are in turn secured to these inserts and the respective surfaces positioned relative to each other with the aid of a suitable jig until the desired alignment is realized. The inserts are then secured in place either mechanically or by cementing and the aligning jig removed. The engaging spherical and conical surfaces permit the bearing race axis to be oriented in any direction during the adjusting period whereby coaxial alignment and parallelism of the bearing races may be easily effected. Other surfaces capable of being aligned and fixed in position such as a sphere in sphere, knife edges or other devices may be used without coming outside the scope of this invention, and the method may be used to align the holder for the inner or outer races, or both.

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APPLICATION

OF

U. S. PATENT OFFICE
MAR 1 1954
DIVISION 12 — PAPER NO.

JOHN S. ADKINS

FOR

UNITED STATES PATENT

ON

GYROSCOPE

Docket No. 2555

No. of Drawings two

Attorneys
Fulwider, Mattingly & Babcock
Los Angeles and Long Beach
California

SPECIFICATION

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOHN S. ADKINS

a citizen of the United States of America,

and resident of Santa Monica

in the County of Los Angeles

and State of California

have invented a new and useful GYROSCOPE

of which the following is a specification:

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A better understanding of the various features of the present invention will be had by referring to the accompanying drawings in which: 2230

Figure 1 is a schematic perspective view partly broken away to illustrate the relative relationships of the gyro components in accordance with the invention;

Figure 2 is an elevational cross-sectional view of a preferred construction of the gyroscope in which the various gimbal mountings are all co-planer for purposes of illustration;

Figure 3 is a perspective view of the unbalanced cup-like disc employed in the erecting mechanism;

Figure 4 is a schematic force diagram useful in explaining the operation of the erecting mechanism;

Figure 5 is a cross-sectional view as seen along the line 5-5 of Figure 2;

Figure 6 is a view similar to Figure 5 showing the orientation of certain components when the gyroscope is in caged position; and

Figure 7 is an elevational view of the form of switch I prefer to use in the operation of my novel erecting system.

Referring now to Figure 1, the basic elements of a gyroscope incorporating the various features of the present invention are shown. This gyroscope is mounted for three degrees of freedom respectively, about three mutually perpendicular axes. These axes are shown in Figure 1 as a horizontal pitch axis X_M^1-X, a vertical gyro spin axis Y_M^1-Y, and a horizontal roll axis Z_M^1-Z. To accomplish the mounting, there is provided an outer fixed support 10 which may be secured to the gyroscope housing, an outer gimbal 11 rotatably mounted on the fixed support, and an inner gimbal 12 rotatably mounted on the outer gimbal and serving to support the gyroscope rotor designated generally by numeral 13.

As shown in Figure 1, the rotor 13 includes a shaft S supported about the vertical or Y_M^1-Y axis by means of an upper holder 14 and a lower holder 15 fixed to the inner gimbal frame 12. The inner gimbal frame 12 itself is mounted for rotation about the horizontal pitch axis X_M^1-X by means of journal bearings 16 and 17 fixed to the outer gimbal 11. Finally, the outer gimbal frame 11 is mounted for rotation about the horizontal roll axis Z_M^1-Z by means of journal bearings 18 and 19 in the outer fixed support 10. With this arrangement, it will be seen that the outer fixed support 10 and housing for the gyroscope may be turned in any manner without changing the direction of the rotor axis which tends to stay fixed in space when the rotor is in motion.

of the gyro axis from the vertical due to the curvature of the earth. This change from a direction initially normal to the earth's surface to an inclined position is due to the tendency of the gyro axis to remain in a fixed direction in space. Therefore, while the aircraft will follow the earth's curvature, the gyro axis will appear to precess, although in reality its direction is fixed. Friction, erroneous erection signals, and other factors also, at times, cause a deviation of the gyro axis from the vertical. In order then, to have a continually accurate indication of a normal to the earth's surface, some sort of vertical erection mechanism must be employed.

Various types of erecting mechanisms have heretofore been used, and one of the most simple is found in a form of construction wherein the lower portion of the gyroscope is made heavier than the upper portion, thereby providing a construction akin to that of a pendulum, from which the gyroscope is termed a pendulous gyroscope. Many other forms of erecting mechanisms have been used, including those in which servo motors are energized to apply a radially directed force to the spin axis of the gyro. In each case, the radially directed force is applied in a direction perpendicular to that of the desired movement of the spin axis, because of the particular properties of gyroscopes, usually known as precession. Thus, if the spin axis of a vertical gyroscope is subjected to a force acting in a north or south direction, the gyroscope and its spin axis will be found to rotate about a

As previously explained, it is necessary to incorporate in a gyroscope mounted in this manner, some means in the form of an erecting mechanism for maintaining the rotor axis normal to the surface of the earth when the gyro is moved over great distances. This is accomplished in the present invention by applying a small force to the axis of the rotor at right angles to the direction it is desired to move the same to keep it normal to the earth's surface. Due to the properties of the gyroscope such a force at right angles results in a movement of the rotor axis in the desired direction. 2232

In Figure 1 there is shown a preferred type of erecting mechanism for the gyroscope. This mechanism comprises a cup-shaped disc 20 coaxial with the rotor shaft S. This disc is adapted to be rotated and includes at one point on its periphery a small weight serving to unbalance the disc. A projection or stop 21 extends from the edge of the disc, and the weight, such as a slug 21a, may be aligned with the projection or circumferentially displaced therefrom, to be located, for example, at the point W.

Disposed on opposite sides of the disc within the gimbal 12 are solenoids 22 and 23, respectively, arranged to cause their associated plungers 24 and 25 to project towards the disc and engage the projection 21. This action will cause the disc 20 to stop rotating with its projection 21 in line with the horizontal pitch axis

horizontal axis, with the spin axis moving in an east or west direction. Since this mode of operation is characteristic of all gyroscopes having three degrees of freedom, erecting mechanisms for such gyroscopes must operate in this manner.

If the gyroscope is of the balanced type, as opposed to the pendulous type, some means must be provided to compare the actual position of the gyroscope to the vertical. Usually this reference takes the form of a generally pendulous member, and the pendulum must be designed to keep its swinging or vibration from causing corresponding movement of the gyroscope itself. This is particularly true in the case of gyroscopes intended for use in aircraft, where the centrifugal force developed by turns and the movement of the aircraft in general must not be allowed to affect the position of the spin axis of the gyro.

One of the primary objects of the present invention accordingly, is to provide a balanced vertical flight gyroscope incorporating a novel erecting means.

Another object is to provide a novel caging mechanism for a gyroscope of this type, for properly orienting the various gimbal mountings of the gyro preparatory to its being used on a prolonged flight or for adjustment purposes during selected periods of its operation. In this connection, the caging system is designed

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X'_M-X, thereby applying a tilting force to the rotor shaft S due to the unbalancing effect of the weight 21a tending to rotate the gyro axis about the horizontal roll Z'_M-Z axis.

A similar cup-shaped unbalanced disc 26 is coaxially disposed below the rotor 13 and is provided with a similar projection 27. A solenoid 28 having a plunger 29 for stopping the projection 27 in a position such that the unbalance weight 27a is in line with the horizontal roll axis Z'_M-Z, and is mounted on the gimbal frame 12 at its lower end as shown. The unbalancing effect of the disc 26 when stop 27 is in line with the Z'_M-Z axis tends to cause the gyro axis to rotate about the X'_M-X axis. A similar solenoid plunger is provided in the diametrically opposite position with respect to disc 26.

In Figure 2 the gyroscope is shown in greater detail, the same reference numerals being employed as in Figure 1 to designate the corresponding components. The positioning of the gimbal mountings as shown in Figure 2 would be their position as seen looking at the gyro in Figure 1 in the direction of the vertical Y'_M-Y axis, the the inner gimbal mounting 12 being rotated about the horizontal X-X axis to lie in the X-Z plane.

Referring to Figure 2, a preferred form of construction of the gyroscope is illustrated. As shown,

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the actual construction of the rotor 13 is that of an inside-out motor. Located around the rotor shaft S are stationary field windings 30 which are connected to a source of electrical power by suitable conductors (not shown) whereby a rapidly rotating magnetic field is established. The rotor 13 is in the form of a cylindrical box structure housing the field windings 30 with the annular cylindrical portion 31 supporting squirrel cage 32 adjacent the stationary field windings 30. As shown, there are provided circular top and bottom plates 33 and 34 closing the ends of the cylindrical portion 31 and supporting the rotor for rotation about shaft S as by ball bearings 35. The interaction between the magnetic fields of the squirrel cage and field windings, respectively, causes rotation of the rotor structure about the shaft S and field windings 30. The unbalanced discs 20 and 26 are shown mounted for free rotation about the shaft S by ball bearings 36.

One means for causing rotation of the cup-shaped discs 20 and 26 about shaft S is to make these unbalanced discs of magnetic material and employ suitable metal parts in the rotor construction, such as the plates 33 and 34 whereby the discs will be dragged round the shaft S with the rotor 13 by drag cup action. Other simple means may be employed such as a frictional drag means, for example.

In order to actuate the solenoid plungers 24 and 25 to stop the disc 20 in a desired position, there is provided a mercury type gravity switch 37 shown in alignment with the horizontal X'-X' axis in Figure 2 and arranged to close a circuit in the solenoids 22 or 23 through a globule of mercury when tilted in one direction or the other. In the particular construction shown, for example, rotation of inner gimbal 12, and consequently of the mercury switch 37 about the X'-X' axis will operate the solenoid 22 or the solenoid 23, depending upon whether the tilting is clockwise or counterclockwise, to maintain unbalanced disc 20 in the position to properly erect the gyro.

To operate the lower solenoid 28 and its oppositely disposed solenoid 38, there is provided a further mercury switch 39 shown disposed at right angles to the mercury switch 37, whereby rotation of the outer gimbal 11 about the Z'-Z' axis will cause operation of either the solenoid 28 or the solenoid 38 to maintain unbalanced disc 26 in the position to properly erect the gyro.

In Figure 7 I have shown a form of switch that I prefer to use to operate the solenoids 22, 23, 28 and 38. As shown in that figure, the switch 37, for example, includes a generally tubular member 70 of insulating material such as glass, formed into an arc of a circle. The center of this circle is concentric with the associated gimbal

The arrangement of the ring caging cam member 42 and operating plunger 44 is shown clearly in Figure 2. Front views of the elongated cam member 51 in uncaged and caged position, as seen along the line 5'-5 of Figure 2, are shown in Figures 5 and 6, respectively.

Operation of the caging mechanism

In the operation of the caging mechanism, as shown in Figure 2, assume that outer gimbal 11 is rotated about the Z'-Z axis 180° to bring the roller element 46 into engagement with the camming surface 45 of the ring cam 42. Urging of the ring cam 42 against the roller 46 by means of the plunger 44 will cause the roller to move down the sloping surface 45 past the first step 50. This camming action will continue moving the roller on down the cam past the step 49 to eventually lodge in the groove 48. As already explained, the steps 50 and 49 effectively prevent any backtracking of the roller 46 in the event the gyroscope is subject to sudden motions. As also explained, the caged position of the outer gimbal 11 is actually in the Y'-Z plane as shown in Figure 1.

Simultaneously with the above described action of the ring cam member, the roller element 54, which is coupled to the roller element 46 through the arm 55, the pivot axis 58, and arm 47, will be urged against the elongated cam 51. This initial engagement is shown in Figure 5. As the plunger 44 is moved inwardly further,

axis, such as the axis X'-X, so that balance and sensitivity problems are minimized. Located within the tubular member 70 is a globule of mercury 71 that is always in electrical contact with a common conductor 72, while the globule may make contact with either of two other conductors 73 and 74, located on opposite sides of the center of the arc of the tubular member 70. Adjacent the center of the arc, the bottom or radially outward portion of the tubular member 70 is somewhat flattened, so that a very slight movement of the tubular member will cause the globule of mercury 71 to move to one side or the other to complete a circuit through conductor 73 or 74 to the corresponding one of the solenoids 22 or 23. In this manner, extreme sensitivity of the switch is secured, while unbalance of the mechanical portions of the gyroscope is kept to a minimum at all times.

Figure 3 shows an enlarged perspective view of the disc 20 clearly showing projection 21 and the positions of unbalance weights 21a and 27a for discs 20 and 26, respectively.

Operation of the Erecting Mechanism

Referring again to Figure 1 and the diagram shown in Figure 4, assume that the gyroscope is mounted in the nose of an aircraft traveling from east to west in the direction of the horizontal Z'-Z axis. As shown in Figure 4, when the rotor axis is normal to the surface of the earth E, as shown in phantom lines, the proper

vertical normal to the earth's surface will be indicated by the gyro regardless of the motion of the aircraft. However, after the aircraft has traveled over a considerable distance in the direction of the horizontal Z^{1}_{M}-Z axis, the gyro axis will assume a tilting angle with respect to the surface E as indicated by the solid line representation of the gyroscope. This apparent tilting is due to the fact that the gyro axis tends to remain fixed relative to space.

Since the force of gravity is always in a direction normal to the surface of the earth, the globule of mercury 71 in the gravity switch 37 will close the right hand contacts causing actuation of the solenoid 23 thereby stopping the upper cup-shaped disc 20 with its unbalancing weight 21a in line with the X^{1}_{M}-X axis. The effect of this unbalanced disc is to exert a tilting force on the gyro axis tending to rotate it about the Z^{1}_{M}-Z axis as indicated by the arrow 41. Due to the characteristics of the rapidly rotating gyroscope, this force results in a resultant motion acting at right angles on the rotor axis as indicated by the arrow 42, this force being in a direction to align the rotor axis again in a direction normal to the surface of the earth E.

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After the axis has been righted, the mercury globule 71 in the switch 37 will return to its center position thereby opening the right hand contacts and permitting retraction of the plunger 25 in solenoid 23 to

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permit the cup-shaped unbalanced disc 27 to resume rotation. 2238

When the gyroscope is tipped to a position with one side lower than the other, i.e., rotated about the Z_M^1-Z axis, a similar action tending to right the gyroscope axis is effected by the gravity switch 39, solenoids 28 and 38, and the unbalanced cup-shaped disc 26. When the gyroscope is moved to positions intermediate those mentioned, both gravity type switches are free to operate to stop the discs 20 and 26 with their weights 21a and 27a, respectively, at 90° to each other resulting in a net unbalancing force on the gyroscope axis tending to rotate it about a suitable axis intermediate the X_A^1-X and Z_M^1-Z axes. Thus, it is seen that the switches are akin to a pendulous type control for the erecting mechanism.

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It is to be understood, of course, that the gravity type switches 37 and 39 are extremely sensitive to slight variations of the rotor axis from the exact normal. These switches therefore could be easily operated by normal turning of the aircraft or changes in its attitude. Stopping of the unbalanced disc for such a relatively short period of time, however, will not affect appreciably the disposition of the gyro axis. In other words, the erecting mechanism has a relatively long time constant and to be effective it is necessary that the discs be stopped for an appreciable period, far longer than the time taken to execute the usual turns or changes in attitude of the aircraft.

It is possible to operate my improved gyroscope with a "hunting" type of erection system. In such a system the cup 20, for example, instead of continually rotating, is normally held with its weight 21a at one side or the other. This causes an unbalance, which acts to tip the gyro and operate the switch 37. Thus, if solenoid 22 has been energized to hold the disc 20, when the gyro has tipped, solenoid 22 is de-energized. Thereupon, either by a mechanical connection or by electrical means, the plunger 25 of solenoid 23 is extended to engage the projection 21 of the cup, thereby unbalancing the gyro in the opposite direction, and causing it to erect. The process continues all the time the gyro is operating, and consequently the gyro "hunts" back and forth across the true vertical.

Construction of Caging Means

Referring again to Figures 1 and 2, in order to insure that the inner and outer gimbal mountings and the frame 12, 11, and 10 are initially properly caged in mutually perpendicular planes, there is included a novel caging mechanism comprising a ring cam member 42 slidably secured to the frame 10 or housing for the gyro as at 43, and adapted to be moved in the direction of the z^{1}_{M}-z axis by means of a plunger member 44. As shown, the ring cam has a tapering width in the direction of the z^{1}_{M}-z axis, the inner facing surface of the ring 45 being adapted to engage a roller 46 secured to an arm 47 in turn rotatably mounted to the intermediate gimbal frame 11.

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Roller 46 is adapted to ride on this camming surface 45 of the ring cam when the gimbal frame 11 is rotating about the Z_M^I-Z axis, the roller 46 falling into a small groove 48 at the point of minimum width of the ring cam, when the gimbal 11 is perpendicular to the outer frame 10. This roller is effectively prevented from back-tracking on the ring cam surface 45 by means of cam steps 49 and 50.

The caging mechanism also includes an elongated elliptically shaped cam 51 secured to the inner gimbal 12 and including steps 52 on its peripheral camming surface 53 adapted to engage a second roller 54 on the end of an arm 55. In properly caged position, roller 54 will seat in the grove 53' in camming surface 53. Arm 55 is coupled to the arm 47 through an opening 56 offset by a projecting portion 57 on gimbal mounting 11 as clearly shown in Figure 5. The two rollers 46 and 54 are thus adapted to move back and forth in small arcuate movements approximately in the direction of the Z_M^I-Z axis by swinging about a pivotal mounting 58 in opening 56. The camming surface 53 of the elongated cam 51 is such as to orient the inner gimbal mounting 12 in a plane perpendicular to the planes of gimbal 11 and frame 10. The properly caged position for the gyroscope is as shown in Figure 1. After this orientation has been effected, the plunger 44 may be retracted leaving the gimbals free to rotate.

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3. The subject matter of claim 2, in which said means for stopping the rotation of the disc comprises a solenoid operated stop member having a plunger adapted to engage the edge of said disc and a gravity operated switch for actuating the solenoid.

4. In a gyroscope including a rotor, an inner gimbal rotatably mounting the rotor, an outer gimbal rotatably mounting the inner gimbal, and a frame rotatably mounting the outer gimbal, a caging mechanism for orienting said gimbals in mutually perpendicular planes comprising: a first cam member having a series of unidirectional step members thereon and slidably secured to the frame; roller means movably secured to the outer gimbal adapted to be engaged by sliding movement of said first cam member; and a second cam member having a second series of unidirectional step members thereon and rigidly secured to the inner gimbal adapted to be engaged by said roller means.

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the roller 54 will cam the momber 51 in a clockwise direction as seen in Figure 5 to the position shown in Figure 6, the roller 54 being seated in the groove 53' as shown. The cam 51 also includes steps 52 effectively preventing any backtracking of the roller 54. This action will swing the inner gimbal mounting 12 about the horizontal X-X axis to bring the rotor axis into alignment with the vertical or Y-Y axis.

It is thus seen that by a simple manual movement of the plunger 44, the gimbal mountings may be properly caged in mutually perpendicular planes. The plunger 44 may be either manually operated or automatically operated as desired.

Bearing Alignment) ..... Ilwl ok

Referring once again to Figure 2, a feature of the present invention contemplates a novel method for insuring precise coaxial alignment of the various bearings journaling the gimbal and rotor shafts. As an example, the bearings 59 and 60 shown secured to opposite sides of gimbal mounting 11 in Figure 2, must be coaxial with respect to each other and lie in parallel planes in order that the inner gimbal mounting shafts 61 will be supported for minimum bearing friction.

In accordance with the method, the inner annular surfaces 62 of the sockets in the intermediate gimbal mounting 11 are of a conical shape. The bearings 59 and 60 are in turn secured to insert elements 63 each having

an annular peripheral surface 64 of the shape of a portion of a sphere, adapted to seat against the conical surface 62. During the initial adjustments, a suitable jig supports the bearings 59 and 60 and attached inserts 63. Because of the conical shape of the surface 62 and the spherical shape of the peripheral surface 64 of the inserts, the axis of each bearing may be properly oriented by a rotating motion applied to the race. This latter motion can be easily accommodated by the engaging surfaces in view of their different curved shapes. It is thus possible to align precisely the two bearings by means of a jig, at which moment the inserts 63 are secured to the gimbal mounting sockets as by cementing, welding, soldering, or by screws, for example. The aligning ~~jib~~ jig may then be removed and the assembly of the gyroscope completed. The same method may be employed for mounting the rotor 13 on the shaft S and for aligning the bearings in the outer gimbal 10 journalling the inner gimbal 11.

The jig used in aligning the bearings may be very simple and in one form takes the shape of a cylindrical rod upon which the bearings are slid preparatory to mounting in their supports. The rod is, of course, accurately formed to be round, without taper, and straight, and held to these conditions within extremely small tolerances. While such a jig requires precision work, it is comparatively simple to secure such a rod and maintain

it within the required tolerances. Previous methods of construction have required the use of precision boring jigs to bore accurately aligned and concentric holes to receive the bearings, and such a jig is both difficult and expensive to fabricate, and easy to get out of adjustment.

Insert D'

While the use of mating conical and spherical surfaces has been mentioned, it is apparent that other similarly cooperating surfaces can be used. For example, a spherical surface can be used within another spherical surface, and other combinations can be employed. Similarly, the inner race of a bearing may be aligned with its holder, or both the inner and outer races may be aligned with their respective holders.

Insert D²

It will be apparent from the foregoing that there has been provided a greatly improved balanced type gyroscope incorporating a novel erecting means, and in which the caging of the gyro can be easily effected by a single movement of a plunger control. The novel method of bearing alignment results in a tremendous simplification in the manufacture of the gyroscope.

Modifications employing the principles of the present invention will occur to those skilled in the art. While a preferred form has been shown and described, it is to be understood that the invention is not to be restricted to the particular form and arrangement of parts herein described and shown, except as limited by the following claims.

I CLAIM:

1. In an erecting mechanism for a gyroscope including a rotor member and a gimbal rotatably mounting the rotor, the combination comprising: an unbalanced disc element coaxial with said rotor; means for rotating the disc; means secured to the gimbal for stopping the rotation of the disc in a selected position; and means responsive to a tilting of the rotor axis from a position normal to the earth's surface for actuating said first-mentioned means.

2. In a vertical flight gyroscope including a rotor, an inner gimbal rotably mounting the rotor, an outer gimbal mounting the inner gimbal for rotation about an axis perpendicular to the rotor axis, and a frame mounting the outer gimbal for rotation about an axis perpendicular to the axis of rotation of the outer gimbal, an erecting mechanism for maintaining the rotor axis normal to the surface of the earth comprising: an unbalanced disc member coaxial with said rotor; means for rotating the disc; and means secured to said inner gimbal for stopping the rotation of the disc in a selected position in response to a gradual tilting beyond a predetermined amount of the rotor axis away from said normal, whereby a correcting torque acts on the rotor axis due to said unbalanced disc to bring the axis back to its normal position.

5. In a gyroscope including a rotor, an inner gimbal rotatably mounting the rotor, an outer gimbal mounting the inner gimbal for rotation about an axis perpendicular to the rotor axis, and a frame mounting the outer gimbal for rotation about an axis perpendicular to the axis of rotation of the outer gimbal, a caging mechanism for orienting said gimbals in mutually perpendicular planes comprising: a ring cam member slidably secured to the frame having a varying width dimension in the direction of the axis of rotation of the outer gimbal; a first roller secured to the outer gimbal offset from said outer gimbal axis and adapted to be engaged by sliding movement of the ring cam; an elongated cam member secured to the mounting shaft of said inner gimbal; and a second roller coupled to the first roller and adapted to bear against the elongated cam member, whereby slidably urging the ring cam against the first roller, cams the outer gimbal into a plane perpendicular to the frame, and urging of the second roller against the elongated cam member cams the inner gimbal into a plane perpendicular to the outer gimbal.

6. The subject matter of claim 5, in which the ring cam surface and the elongated cam surface include graded steps tending to prevent the engaging rollers from retrogressing.

7. A method of aligning bearings supporting a relatively movable element comprising the steps of: providing a curved surface about the periphery of each bearing; providing a surface of different curvature on the mating surface of the member receiving said bearing; placing said curved surface of said bearing in sliding contact with said mating curved surface; adjusting said bearings with respect to said mating surfaces so that said bearings are coaxial; and securing said surfaces in the adjusted position.

8. A method of aligning bearings in coaxial relationship and parallel planes for supporting a rotatable element in a mounting, said mounting including opposed receiving sockets substantially coaxially aligned and in parallel planes for the bearings, comprising the steps of: forming a truncated conical inner surface in each socket; forming a truncated spherical surface about the periphery of the bearings adapted to engage the conical surfaces; aligning the bearings in parallel planes and coaxial relationship by adjusting movements of the spherical surfaces against the conical surfaces; and holding said surfaces together in the adjusted position.

9. An alignable bearing structure for supporting ~~an~~ a bearing element movable with respect to another element, which includes: a bearing ~~having a peripheral curved surface~~; ~~a bearing-receiving member having a mating surface for receiving said curved surface of said bearing, said mating surface having a different curvature from that of said curved surface of said bearing, whereby said bearing may be turned relative to said receiving member for alignment purposes;~~ and means retaining ~~said bearing and~~ said bearing-receiving member in aligned position.

=10-30-59

#2

410237

Pat. #2,911,584 1-5-60

PRINT OF DRAWING AS ORIGINALLY FILED

Fig. 1

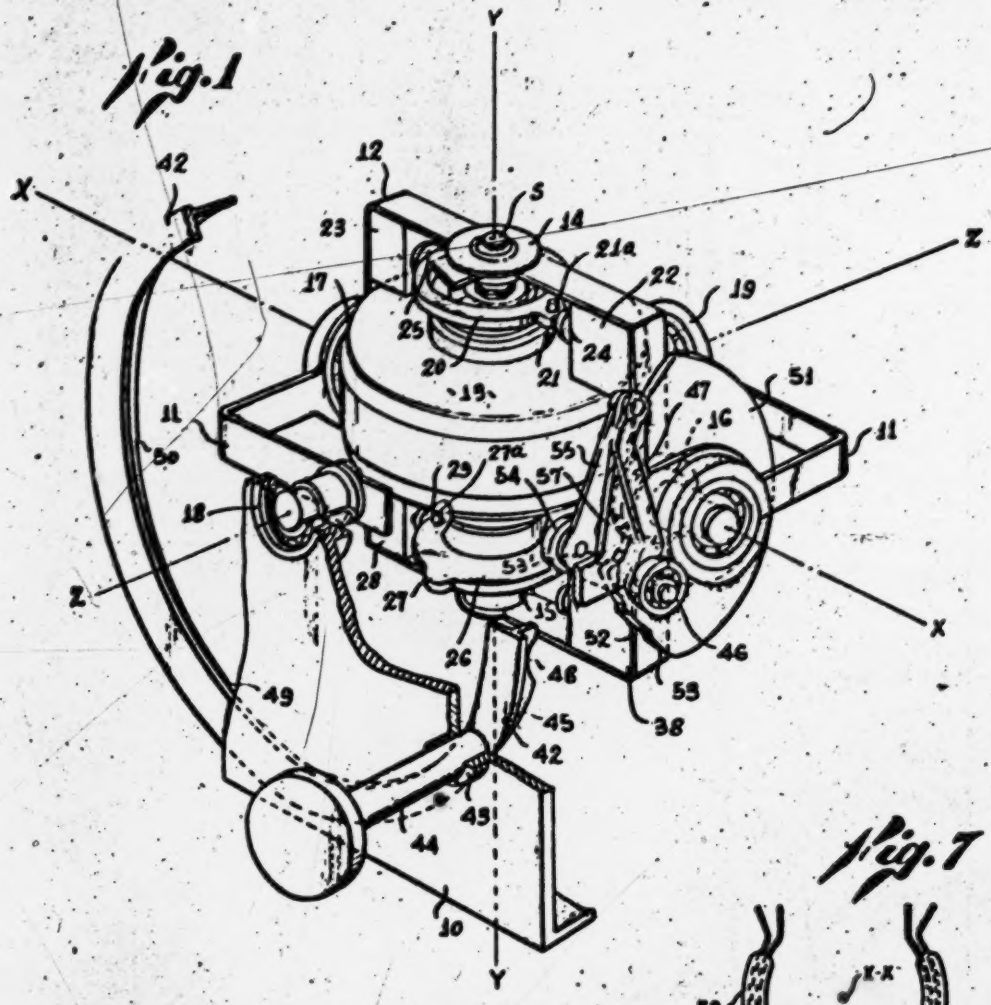


Fig. 7

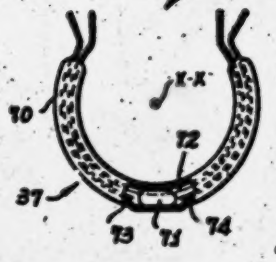
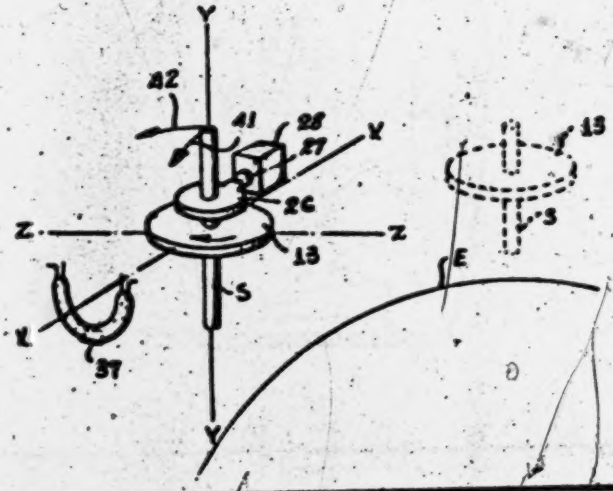


Fig. 4



INVENTOR.
JOHN S. ADKINS
BY Lukaider, Mattingly & Babcock
Attorneys

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112 Pi... P-1,015 63 ... 9

7 10. In a gyroscope including a rotor, an inner gimbal rotatably mounting the rotor, an outer gimbal mounting the inner gimbal for rotation about an axis perpendicular to the rotor axis, and a frame mounting the outer gimbal for rotation about an axis perpendicular to the axis of rotation of the outer gimbal, the combination comprising: having a series of undirectional step means thereon a first cam member movably secured to the frame; a second having a second series of unidirectional step means thereon cam member rigidly secured to the inner gimbal; a cam roller means movably secured to the outer gimbal; means for moving the first cam member into engagement with the roller means whereby the roller means will be urged against the second cam member, the inner and outer gimbals being cammed into mutually perpendicular planes with respect to each other and said frame; means for retracting the first cam member to free the gimbals; a continuously rotating an unbalanced disc coaxial with the rotor, and rotating at a relative low speed and means secured to said inner gimbal responsive to tilting of the rotor axis for stopping said disc in a selected position.

11. The subject matter of claim 9, in which first and second cam surfaces are provided with graded steps for preventing the engaging roller means from retrogressing.

FIRST OF DRAWING AS ORIGINALLY FILED

Fig. 2

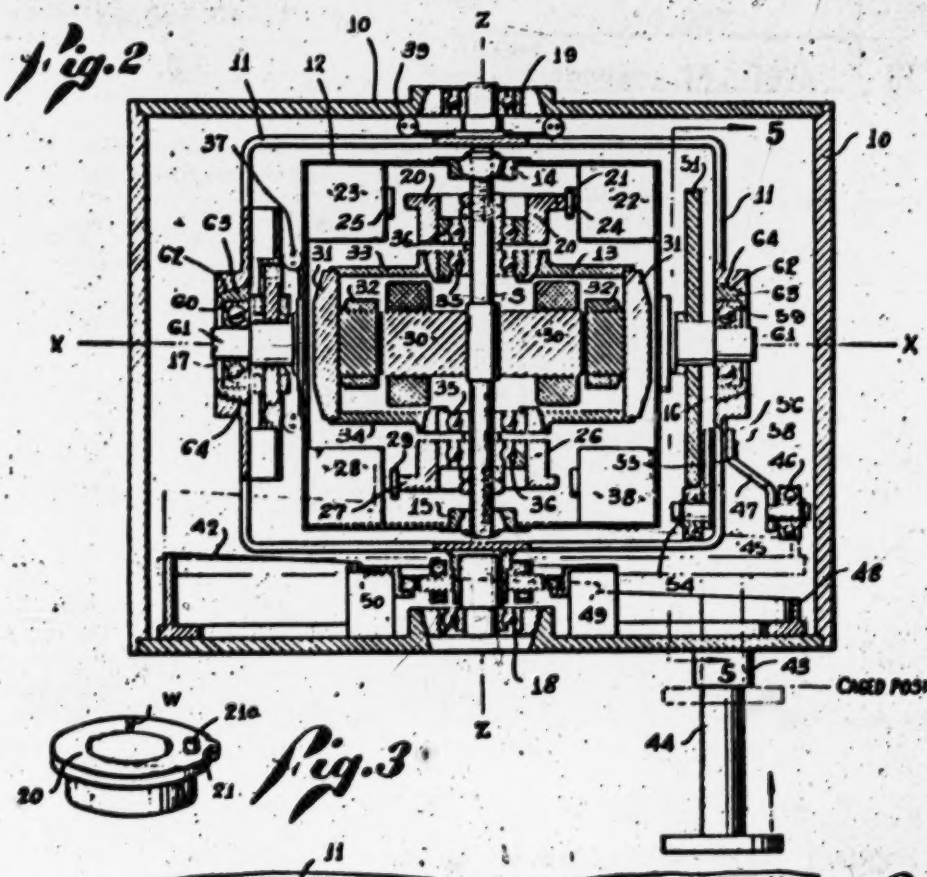


Fig. 3

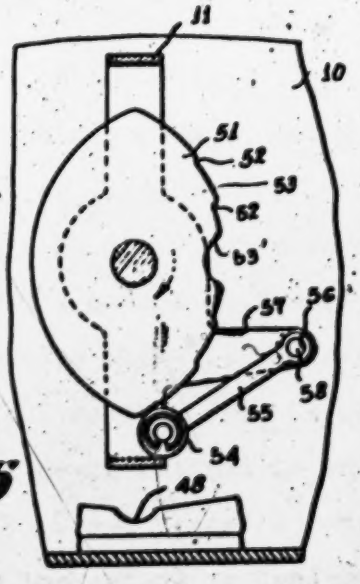


Fig. 5

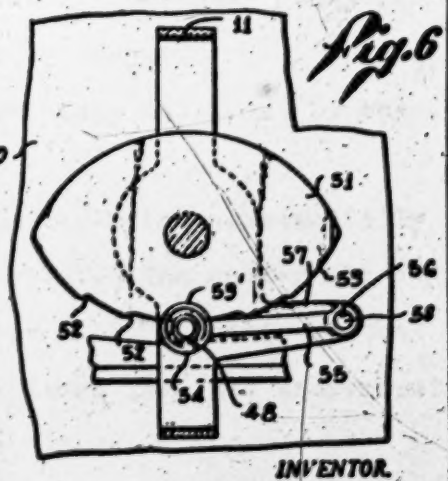


Fig. 6

INVENTOR.
JOHN S. ADKINS
BY Lalonde, Mallinger & Eglund
Attorneys

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12. A gyroscope comprising inner and outer gimbals and frame for mounting a rotor element with three degrees of freedom; an unbalanced disc having its axis substantially coinciding at all times with the axis of the rotor; means for rotating the disc in response to rotation of the rotor; means on the inner gimbal for stopping rotation of the disc in a selected position operative in response to a tilting of the rotor axis from a direction normal to the surface of the earth; a ring cam member slidably secured to the frame; roller means movably secured to the outer gimbal adapted to be engaged by sliding movement of the ring cam member; and an elongated cam rigidly secured to the inner gimbal adapted to be engaged by said roller means.

13. The subject matter of claim 11, in which said means on the inner gimbal for stopping rotation of the disc comprises a solenoid operated stop member secured to said inner gimbal for limited movement to engage the disc, and a gravity operated switch for actuating the solenoid.

Serial No. 410,237

Claims 10 to 13 are rejected as unpatentable over Barkalow et al in view of the French patent to Jaeger. No invention would be involved broadly in using the erecting mechanism of Jaeger to provide erection for the vertical gyro of the Barkalow et al patent.

Claims 14 and 15 are rejected as being substantially fully met by the Italian patent to Galileo. The curved mercury tube switch of Galileo is considered the full equivalent of the switch means recited in these claims.

Claims 16 and 17 are rejected as failing to define any invention within the statutory requirements of Title 35 Section 112 U. S. C.

Claims 1 to 17 are rejected.

Examiner

TWShear/pw

14. A gyroscope which includes: a rotor; an inner gimbal mounting said rotor; an outer gimbal rotatably mounting said inner gimbal; a frame rotatably mounting said outer gimbal; means operable to apply an unbalanced force to said rotor to cause it to precess; and switch means operatively connected to said force applying means for controlling the operation of the latter, said switch means including a member formed in an arc of at least a portion of a circle, said switch means being mounted on a gimbal with the center of said arc substantially concentric with the axis of rotation of the gimbal on which said switch means is mounted.

15. A switch of the class described which includes: a generally tubular member formed in an arc of at least a portion of a circle, said member having a relatively flatter portion in the middle of said arc on the radially outer wall of said members; an electrical contact member freely movable within said tube; conducting member within said tube adapted to establish an electrical circuit to said contact member; and a second conducting member within said tube adapted to be touched by said contact member to establish an electrical circuit thereto when said contact member moves from said middle of said arc.

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16. A gyroscope substantially as shown and described with respect to the accompanying drawings.

17. The method of aligning bearings in gimbal mounting for a gyroscope substantially as described.

add A →
" B
" C
" D
" E'

29

MAIL DIVISION
MAR - 7 1955

U. S. PATENT OFFICE

MAR 9 1955

DIVISION 12 - PAPER NO. 4

IN THE UNITED STATES PATENT OFFICE

In re application of

JOHN S. ADKINS

Serial No. 410,237

Filed February 15, 1954

For GYROSCOPE

SUBSTITUTION OF ATTORNEYS

Patent Division 12

Hon. Commissioner of Patents
Washington 25 D. C.

Sir:

In the matter of the above-entitled application for Letters Patent, we hereby appoint the firm of

FULWIDER, MATTINGLY & HUNTLEY
Registration No. 16,245
5225 Wilshire Boulevard
Los Angeles 36 California

composed of Robert W. Fulwider, Walter P. Huntley, Warren L. Patton, William K. Rieber, John M. Lee and Francis A. Utecht as substitute attorneys, with full power of substitution and revocation, to prosecute said application, to make alterations and amendments therein, to receive the patent and to transact all business in the Patent Office connected therewith.

Signed at Los Angeles, California, this 4th day of March, 1955.

FULWIDER, MATTINGLY & BABCOCK

By Warren L. Patton
Attorneys for Applicant

MCL

U. S. PATENT OFFICE

MAR 9 1955

DIVISION 12 - PAPER NO. 5

AMENDMENT a

IN THE UNITED STATES PATENT OFFICE

In re application of

JOHN S. ADKINS

Serial No. 410,237

Filed: February 15, 1954

For: GYROSCOPE

Patent Division 12

Los Angeles, California
March 4, 1955

Hon. Commissioner of Patents
Washington 25, D. C.

Sir:

In response to the Office Action mailed September 8, 1954, please amend the above-identified application as follows:

IN THE SPECIFICATION

Page 19, line 15, cancel "jib" and insert therefor -- jig --

IN THE CLAIMS

Claim 1, line 4, after "for" insert -- continuously --

line 5, cancel the semi-colon and insert therefor -- at a relatively low speed; --

line 6, cancel the semi-colon and insert therefor -- , whereby the unbalanced weight of said disc causes the precession of said rotor; --

OATH, POWER OF ATTORNEY, AND PETITION

Being duly sworn, I JOHN S. ADKINS depose and say that I am a citizen of the United States of America residing at: Santa Monica, California that I have read the foregoing specification and claims and I verily believe I am the original, first and sole inventor of the invention or discovery in GYROSCOPE described and claimed therein; that I do not know and do not believe that this invention was ever known or used before my invention or discovery thereof, or patented or described in any printed publication in any country before my invention or discovery thereof, or more than one year prior to this application, or in public use or on sale in the United States for more than one year prior to this application; that this invention or discovery has not been patented in any county foreign to the United States on an application filed by me or my legal representatives or assigns more than twelve months before this application; and that no application for patent on this invention or discovery has been filed by me or my representatives or assigns in any country foreign to the United States, except as follows:

And I hereby appoint

FULWIDER, MATTINGLY & BABCOCK
Registration No. 16,245
5225 Wilshire Boulevard
Los Angeles 36, California

my attorneys with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent Office connected therewith.

Wherefore, I pray that Letters Patent be granted to me for the invention or discovery described and claimed in the foregoing specification and claims, and I hereby subscribe my name to the foregoing specification and claims, oath, power of attorney, and this petition, this 27th day of November 1953

Inventor John S. Adkins (Note later 7 signatures)

First Name	Middle Initial	Last Name
John	S.	Adkins

Post Office Address 468 Twenty-first Street
Santa Monica, California

STATE OF CALIFORNIA }
COUNTY OF LOS ANGELES } ss.

Before me personally appeared JOHN S. ADKINS to me known to be the person described in the above application for patent, who signed the foregoing instrument in my presence, and made oath before me to the allegations set forth therein as being under oath, on the day and year aforesaid.

Notary Public in and for said County and State
My Commission Expires Feb. 18, 1957

This form may be executed only when attached to a complete application as the last page thereof.

Approved Single Signature Form
(279)

SEAL

WLP/aj

30

18. In the method of bearing alignment in which a bearing having a curved convex peripheral surface is mated with a differently curved concave surface in a supporting member, the bearing being aligned with another corresponding bearing and both supporting a member movable relative to the supporting member, the steps of: placing the curved peripheral convex surface of said bearing in contact with the differently curved concave surface of said supporting member; relatively shifting said curved surfaces of one bearing and its supporting member so that the axis of said bearing is coincident with the axis of said other corresponding bearing; and maintaining the relative positions of said bearing and said supporting member as established by the preceding step, by permanently securing said bearing and said supporting member together.

19. In the method of bearing alignment in which a bearing having a curved peripheral convex surface is mated with a differently curved concave surface in a supporting member, the bearing being aligned with another corresponding bearing and both supporting a member movable relative to the supporting member, the steps of: placing the curved peripheral convex surface of each of said bearings in contact with the differently curved concave surface of the corresponding supporting member; relatively shifting said curved surface of each of said bearings and its supporting member to simultaneously align the axes of said bearings so that said axes coincide; and permanently securing each bearing and its supporting member together while said bearings are held in aligned position.

add B'

POL-85
Rev.,

ADDRESS ONLY
THE COMMISSIONER OF PATENTS
WASHINGTON 25, D. C.

DEPARTMENT OF COMMERCE
UNITED STATES PATENT OFFICE
WASHINGTON

All communications regarding this application should give the serial number, date of filing, and name of the applicant.

PAPER No. 3

Fulwider, Mattingly & Babcock
5225 Wilshire Boulevard
Los Angeles 36, California

Applicant: John S. Adkins	
Ser. No. 410,237	MAILED
Filed February 15, 1954	SEP 8 1954
For GYROSCOPE	PAT. OFF.

Please find below a communication from the EXAMINER in charge of this application.

Robert C. Watson
Commissioner of Patents.

This application has been examined.

References relied upon:

6 Lane	2,326,784	Aug. 17, 1943	74-5.44x
7 Carlson	2,352,469	June 27, 1944	74-5x
11 Slater et al	2,649,808	Aug. 25, 1953	74-5
10 Barkalow et al	2,641,133	June 9, 1953	74-5.1
3 Galileo (Italy)	371,412	Mar. 23, 1939 (1 sht. Dwg. - 5 pages spec.)	74-5.44
1F Jaeger (France)	982,948	June 18, 1951 (1 sht. Dwg. - 3 pp. Spec.)	74-5.44

Claims 1 to 17 appear in this application.

Claims 1 and 2 are rejected as being obviously fully met by either of the patents to Lane or Jaeger.

Claim 3 is rejected as being obviously fully met by the French patent to Jaeger.

Claims 3, 4, 5 and 6 are rejected as being substantially fully met by the patent to Barkalow et al. The roller and cam means of Barkalow which is the reverse of applicant's in that the roller applies the force is considered the full equivalent of the caging means recited in these claims.

Claims 7, 8 and 9 are rejected as being substantially fully met by the patent to Carlson. The bolt and nut arrangement 12, 13 is considered a means for securing the surfaces in adjusted position.

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REMARKS

By this amendment, an effort has been made to distinguish all of the claims from the references cited.

It will be recognized that each of the patents cited shows a Gyroscope having a number of different characteristics from applicant's Gyroscope and these differences have been distinctly pointed out in the claims as they now stand.

For example, Claims 1 and 2 have been rejected on the patents to Lane and Jaeger, and the patent to Lane shows an air-driven Gyroscope in which a shiftable valve control the air that is withdrawn from the housing enclosing the entire Gyroscope. The effective force to cause precession and erection of the Gyroscope is provided by the reaction of this air, and on Page 2, Column 1, lines 11 through 16, Lane states that the reaction of the air exerts a torque that tends to erect the Gyroscope. This is an entirely different method of operation than applicant proposes, and the claims have been amended to specify this difference.

Similarly, the patent to Jaeger shows primarily a switch that can be used to allegedly cause the erection of a Gyroscope. However, the method shown in the Jaeger patent is impractical and probably inoperative. Thus, instead of having a constantly rotating disc, as applicant has, Jaeger shows a

Claim 2, line 6, cancel "outer" and insert therefor -- inner --
line 10, after "for" insert -- continuously --;
cancel "the" and insert therefor -- said --;
cancel the semi-colon and insert therefor
-- at a relatively low speed; --
line 14, after "to" insert -- the unbalanced weight of --
Claim 3, line 3, after "member" insert -- having a plunger --
line 4, after "the" insert -- edge of said --
Claim 4, line 6, after "member" insert -- having a series of
unidirectional stop members thereon and --
line 9, before "rigidly" insert -- having a second
series of unidirectional stop members thereon and --
Claim 5, line 10, after "gimbal" insert -- and having a series of
unidirectional stop means thereon --
line 14, after "gimbal" insert -- and having a second
series of unidirectional stop means thereon --
Claim 6, line 1, after "the" (second occurrence) insert -- series of unidirectional
stop means on the --
line 3, cancel "tending" and insert therefor -- acting --
line 4, cancel the period and insert therefor -- and
moving away from the low point of said cam
surfaces. --
Claim 9, line 9, after "means" insert -- permanently and
immovably --
Claim 10, line 7, after "member" insert -- having a series of
unidirectional stop means thereon and --
line 8, after "member" insert -- having a second series
of unidirectional stop means thereon and --
line 15, cancel "an" and insert therefor -- a continuously
rotating --

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Serial No. 410,237

Claim 10, line 16, cancel the comma and insert therefor
(Cont'd)
-- and rotating at a relatively low speed; --

Claim 12, line 5, before "rotating" insert -- continuously --

line 6, after "rotor" insert -- and at a relatively slow speed --

line 12, cancel "and"

line 14, cancel the period and insert therefor ; and

(a2) means on each of said cam member preventing movement of said roller away from the low points of said cam members.

Cancel Claims 7, 8, 11, 13, 15, 16 and 17

Add the following new claims.

single unbalanced disc that may be indexed by the energization of a selected one of a plurality of magnets. As a result, as soon as the gyroscope is erected, and the need for the unbalance is gone, the disc is maintained in its then position, and continues to unbalance the gyroscope until such time as the devicehas proceeded past its vertical position and has become unbalanced in the opposite direction. At that time, another magnet is energized, and the disc supposedly would rotate 180° to the new position. However, such movement of the disc would require the use of an entirely different method of producing the magnetic field and causing rotation, and in the disclosed system, the desired results would not be achieved.

Claims 1 to 3 have been amended to specify that the disc in applicant's device is constantly rotating, thereby clearly distinguishing from the Jaeger patent, and have been further amended to specify that the unbalance of the disc is what causes the precession, rather than the reaction of the jets, as disclosed by Lane.

Claims 3 through 6 have been rejected as substantially met by the patent to Barkalow, since the roller and cam means were believed by the Examiner to be the equivalent of that shown by applicant. However, it should be noted that applicant is concerned with the prevention of reverse rotation of the roller with respect to the cam, and has provided unidirectional stop means in the form of steps that prevent the backward movement of the roller. This is a feature that has not been shown or suggested by Barkalow or any other designer of which applicant is aware, and this feature is clearly pointed out in these claims.

As a result, it is believed that these claims are clearly and properly allowable over the references cited.

Claims 7, 8 and 9 have been rejected as being substantially fully met by the patent to Carlson, since the Examiner has stated that the bolt and nut arrangement is considered a means for securing the surfaces in adjusted position. Claims 7 and 8 have been cancelled and replaced by new claims 18 and 19, and it is thought that the differences between the Carlson device and applicant's are more clearly brought out by the new claims. For example, Carlson shows a self-aligning bearing construction in which the bearings are designed to move to maintain the requisite alignment throughout the life of the instrument. The curved surfaces that Carlson provides permit this movement, which is only restrained by the bolt nut and spring arrangement which he shows. Applicant, on the other hand, completely and properly aligns the bearing members and then finally and fixedly holds them in position by some suitable means such as soldering, cement, or even a screw. In this manner, once the alignment is properly and accurately secured, this is maintained without any requirement for continuous adjustment or compensation as Carlson uses.

While the Carlson method is a good expedient where large quantities of instruments such as gyroscopes must be produced in a short time without the aid of skilled workers, it is not the form of construction that is best adapted to produce long and trouble-free service. Applicant's method, on the other hand, is no more difficult to follow and produces results that are markedly superior. Such a method of construction permits the

rapid and accurate assembly of large numbers of gyroscopes with very precisely balanced rotors, while at the same time making use of relatively unskilled workers, holding tolerances to a relatively large value.

As the claims are now presented, they are believed to clearly and properly distinguish from the Carlson reference, and consequently are thought to be allowable.

In a manner similar to that previously described, the remaining claims of the case have been amended to distinguish from the references cited against them. It will be recognized that applicant has produced a new gyroscope that advances the state of the art, and that as a result, more accurate gyroscopes may be now produced in greater quantity, at a higher rate, and at less cost. Some of the important features of applicant's design are responsible for this, the most important of these features being the use of the constantly rotating unbalanced disc, the roller and cam arrangement with unidirectional stops, and the improved method of aligning the bearings. As a result, it is thought that a distinct advance in the art has been made, and such advance is protectable by patent.

In view of the foregoing, a reconsideration and favorable action on the claims now in the case is requested. A notice of allowance is believed proper, and the same is requested.

Respectfully submitted,
FULWIDER, MATTINGLY & HUNTLEY

By _____
Attorneys for Applicant

WLP/hs

POL-90
Rev.
ADDRESS ONLY
THE COMMISSIONER OF PATENTS
WASHINGTON 25, D. C.

DEPARTMENT OF COMMERCE
UNITED STATES PATENT OFFICE
WASHINGTON

All communications regarding this application should give the serial number, date of filing, and name of the applicant.

PAPER No. 6

Fulwider, Mattingly and Huntley
5225 Wilshire Boulevard
Los Angeles 36, California

Applicant: John S. Adkins	
Ser. No. 410,237	MAILED
Filed February 15, 1954	MAR 21 1957
For GYROSCOPE	PAT. OFF. DIV 12

Please find below a communication from the EXAMINER in charge of this application.

Robert C. Watson
Commissioner of Patents.

Responsive to amendment filed March 7, 1955.

References relied upon:

Grenat	2,531,334	Nov. 21, 1950	308-72x
Smith (Great Britain)	645,896	Nov. 8, 1950	74-5.6

(1 sht. Dwg. - 4 pps. Spec.)

References made of record:

Sperry	1,342,397	June 1, 1920	74-5.8
Slater et al	2,649,808	Aug. 25, 1953	74-5

Claims 1 to 6, 9, 10, 12, 14, 18 and 19 appear in this application.

Claim 1 is rejected as misleading and misdescriptive in that lines 6 to 8 recite the rotor tilt responsive means as actuating the means for continuously rotating the disc. This is obviously inaccurate since it is the disc stopping means that is actuated upon tilt of the rotor axis.

Claims 9, 18, and 19 are rejected as being obviously fully met by the patent to Grenat.

Claim 14 is rejected as being fully met by either of the patents to Smith, cited, or Galileo, of record.

Claims 2 to 6, 10 and 12 appear to be allowable.

Claims 1, 9, 18, and 19 are rejected.

Examiner

TWShear/pw

SEP 23 1957

U. S. PATENT OFFICE

SEP 27 1957

NCL

IN THE UNITED STATES PATENT OFFICE

DIVISION 12 — PAPER NO. 7

In re application of:
JOHN S. ADKINS
Serial No.: 410,237
Filed: February 15, 1954
For: GYROSCOPE

B

Patent Division 12

Los Angeles 36, California
September 20, 1957

Hon. Commissioner of Patents
Washington 25, D. C.

Sir:

In response to the Office Action mailed March 21, 1957, please amend the above-identified application as follows:

IN THE CLAIMS:

Claim 1, Line 8, change "first" to -- disc
Line 9, change "mentioned" to -- stopping --
Claim 9, Line 3, after "curved" insert -- convex --
Line 4, after "having a" insert -- concave --
Claim 18, Line 2, after "curved" insert -- convex --
Line 3, after "curved" insert -- concave --
Line 6, after "peripheral" insert
-- convex --
Line 7, after "curved" insert -- concave --

Serial No. 410,237

Claim 19, Line 2, after "peripheral" insert

-- convex --

Line 3, after "curved" insert

-- concave --

Line 6, after "peripheral" insert

-- convex --

Line 7, after "curved" add -- concave --

Add the following new Claims 20 and 21:

-- 20. An alignable bearing construction which includes: a supporting member having a concave surface which is a surface of revolution generated by a curved generatrix; a member cooperating with said supporting member and having a convex surface which is a surface of revolution generated by a curved generatrix, said convex surface fitting within said concave surface and bearing thereagainst; anti-friction bearing means connected to said cooperating member and supported thereby; and means holding said cooperating member against relative movement with respect to said supporting member, whereby said members may be locked in a desired position, thereby permitting proper positioning and alignment of said anti-friction bearing means.

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-- 21. An alignable bearing construction which includes: a supporting member having a bearing surface which is a surface of revolution generated by a curved generatrix; a member cooperating with said supporting member and having a bearing surface which is a surface of revolution generated by a curved generatrix, one of said bearing surfaces being concave and the other being convex, said convex surface fitting within said concave surface and bearing thereagainst; anti-friction bearing means connected to said cooperating member and supported thereby; and means holding said cooperating member against relative movement with respect to said supporting member, whereby said members may be locked in a desired position, thereby permitting proper positioning and alignment of said anti-friction bearing means. --

Cancel Claim 14.

REMARKS

The corrections suggested by the Examiner for Claim 1 have been incorporated by this amendment, and this claim is now thought to be allowable.

Claims 9, 18 and 19, relating to the bearing alignment construction, and rejected on the patent to Grenat, have been amended to specify that the surfaces of the adjusting or adjustable members, corresponding to surface 62 and member 63 of applicant's device, are concave and convex surfaces, thereby distinguishing

from the reference. It will be noted that the construction shown by the cited reference makes use of a cylindrical bore in which there is placed a uniformly tapered, or conical bushing. Applicant's device makes use of two surfaces of revolution, both generated by curved generatrices, the two surfaces having different curvature, and one surface being concave and the other convex. This is clearly different from the construction shown by the reference.

In a similar manner, new claims 20 and 21 point out this distinction even more explicitly, and these two claims, like the remaining claims in the case, are now thought to be clearly and properly allowable.

In view of the foregoing, a reconsideration and favorable Action is requested, and a Notice of Allowance is urged.

Respectfully submitted,

FULWIDER, MATTINGLY & HUNTLEY

By _____
Attorneys for Applicant

WLP/np

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U. S. PATENT OFFICE

JAN 21 [illegible]

DIVS. [illegible] NO. 8

IN THE UNITED STATES PATENT OFFICE

In re application of:
JOHN S. ADKINS
Serial No: 410,237
Filed: February 15, 1954
For: GYROSCOPE

Patent Division (12)

SUPPLEMENTAL AMENDMENT

Los Angeles 36, California
December 31, 1957

Hon. Commissioner of Patents
Washington 25, D. C.

Sir:

In further response to the Office Action of March 21, 1957, and supplementing the amendment dated September 20, 1957, please amend the above-identified application as follows:

IN THE CLAIMS:

Add the following new Claims 22 through 26:

--22. An alignable bearing construction which includes: a supporting member having an aperture therein; a member cooperating with said supporting member and having means adapted to fit within said aperture, said aperture and said means being cooperatively shaped so that said means may be inserted into said aperture but cannot pass therethrough;

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anti-friction bearing means connected to said cooperating member and supported thereby; and means holding said cooperating member against relative movement with respect to said supporting member, whereby said members may be secured in a desired position, thereby permitting proper positioning and alignment of said anti-friction bearing means. --

-- 23. An alignable bearing construction which includes: a supporting member having a generally circular aperture therein; a member cooperating with said supporting member and having means adapted to fit within said aperture and be movable with respect thereto, the maximum diameter of said means being greater than the minimum diameter of said aperture, whereby said means may be inserted into said aperture but cannot pass therethrough; anti-friction bearing means connected to said cooperating member and supported thereby; and means holding said cooperating member against relative movement with respect to said supporting member, whereby said members may be secured in a desired position, thereby permitting proper positioning and alignment of said anti-friction bearing means. --

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-- 24. An alignable bearing construction which includes: a supporting member having a generally circular aperture therein; a member cooperating with said supporting member and having means adapted to fit within said aperture and be movable with respect thereto, the maximum diameter of said means being greater than the minimum diameter of said aperture, whereby said means may be inserted into said aperture but cannot pass therethrough; anti-friction bearing means connected to said cooperating member and supported thereby; and cementing means between said first means and the wall of said aperture, axial movement of said first means placing said cementing means in compression, whereby said cooperating member may be secured in a desired position with respect to said supporting member, thereby permitting proper positioning and alignment of said anti-friction bearing means. --

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-- 25. An alignable bearing construction which includes: a supporting member having a pair of spaced, substantially aligned apertures therein; a member cooperating with said supporting member and having means adapted to fit within said apertures, each of said means and said apertures being cooperatively shaped so that each of said means may be inserted into a corresponding aperture, but cannot pass therethrough; anti-friction bearing means connected to said cooperating member and supported thereby; and means holding said cooperating member against relative movement with respect to said supporting member, whereby said members may be secured in a desired position, thereby permitting proper positioning and alignment of said anti-friction bearing means.

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compressive forces, as is the case in applicant's device. As a result, applicant's design provides a more secure and more certain restraint against any end play in the bearing alignment construction, while providing the desirable axial alignment that is the object of all such constructions.

Considering now the claims, Claim 22 specifies that the means adapted to fit within the aperture and the aperture itself are so shaped that the means may be inserted into the aperture but cannot pass through it. This is a clear and distinct difference from the construction shown in the Grenat patent, and is believed to patentably distinguish from that patent.

New Claim 23 specifies that the means adapted to fit within the aperture is movable with respect to the aperture, and that the maximum diameter of the means is greater than the minimum diameter of the aperture, thereby further distinguishing from the reference. Finally, Claim 24 includes the limitations of Claim 23 and recites that the cementing means is placed in compression by axial movement of the first means, which fits within the aperture. This again clearly and patentably distinguishes from the reference.

New Claim 25 is generally similar to new Claim 22, but specifies that there are two aligned apertures with corresponding means fitting into them, thus defining both

end supports for a shaft or similar means. Likewise, new Claim 26 is based upon new Claim 24, but also specifies two apertures and corresponding means fitting into them. These claims are believed allowable for the same reasons which render Claims 22 and Claim 24 allowable, as well as for the additional limitations in them.

In view of the foregoing, a favorable Action on the newly presented claims is requested.

Respectfully submitted,
FULWIDER, MATTINGLY & HUNTLEY

By Warren L. Patton
Attorneys for Applicant

WLP/np

U. S. DEPARTMENT OF COMMERCE
PATENT OFFICE
WASHINGTON

All communications regarding this application should give the serial number, date of filing, and name of the applicant.

Paper No. 9

Fulwider, Mattingly & Babcock
5225 Wilshire Blvd.
Los Angeles 36, California

Applicant: John S. Adkins	
Ser. No. 410,237	MAILED
Filed February 15, 1954	JUN 20 1958
For GYROSCOPE	PAT DIV 12

Please find below a communication from the EXAMINER in charge of this application.

Robert C. Watson
Commissioner of Patents.

Responsive to amendments filed September 23, 1957, and January 13, 1958.

Claims 1 to 6, 9, 10, 12 and 18 to 26 appear in this application.

Claims 9, 18, and 19 are rejected as being fully met by Grendt. The outer surface of 8 forms a curved convex peripheral surface, and the inner surface of 1 forms a curved concave surface.

Claims 20 to 26 are rejected as being fully met by the patent to Sperry. The clamping means disclosed in Fig. 11 is considered the full equivalent of a cemented bearing arrangement. The particular means used for holding the bearing is considered to be a matter of choice rather than invention.

Claims 2 to 6, 10 and 12 appear to be allowable.

Claims 9, 18, and 19 to 26 are rejected.

TWShear/fl

Examiner

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MAIL ROOM DEC 22 1958 U.S. PATENT OFFICE

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U. S. PATENT OFFICE
DEC 30 1958

IN THE UNITED STATES PATENT OFFICE

DIVISION 12 — PAPER NO. 10

In re application of:

JOHN S. ADKINS

Serial No. 410,237

Filed: February 15, 1954

For: GYROSCOPE

Patent Division 12

AMENDMENT

Los Angeles 36, California
December 19, 1958

Hon. Commissioner of Patents
Washington 25, D. C.

Sir:

Responsive to the Office Action of June 20, 1958, please amend the above-identified application as follows:

IN THE SPECIFICATION:

Page 20, line 7, before the beginning of this insert the following paragraphs:

The above described method and means insures that bearings are properly aligned upon being placed in the inserts, and this is so whether they are the original bearings or replacement bearings. After aligning and fixing the inserts 63 to the frame, bearings can readily be removed from and inserted therein, with complete assurance that the bearings are properly positioned when so inserted. All that is required to remove a bearing is to tap it and remove it from the insert; a new bearing is easily and quickly installed by tapping it into the insert. The inserts, being properly aligned, initially, maintain their alignment perma-

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nently. This arrangement contrasts sharply with prior art bearing alignment means and procedures, which involve securing the outer portion of the bearing to the frame. To replace bearings in such arrangements, the connection between the bearing and frame is broken so that it can be removed. Since new bearings when positioned are not connected to the frame, the entire alignment procedure must be carried out before they can be secured in place.

Alignment of bearings as heretofore practiced involves considerable care, time and expense, and requires the services of a skilled worker. But with the bearing alignment method and means of my invention, bearings can be replaced in a minimum of time by an unskilled mechanic, and with complete assurance that the bearings, upon being inserted in the inserts 63, are completely and accurately aligned.

Page 20, line 14, after the period, insert the following: Further, not only may the confronting surfaces (of the inserts 63 and the walls of the openings in which they are oriented) be of any desired

--26. An alignable bearing construction which includes: a supporting member having a pair of spaced, substantially aligned generally circular apertures therein; a member cooperating with said supporting member and having a pair of means, each adapted to fit within a corresponding one of said apertures and be movable with respect thereto, the maximum diameter of each of said means being greater than the minimum diameter of the corresponding one of said apertures, whereby each of said means may be inserted into the said corresponding aperture but cannot pass therethrough; anti-friction bearing means connected to said cooperating member and supported thereby; and cementing means between said pair of means and the walls of said corresponding apertures, axial movement of said pair of means placing said cementing means in compression, whereby said cooperating member may be secured in a desired position with respect to said supporting member, thereby permitting proper positioning and alignment of said anti-friction bearing means.

configuration, my invention also is not limited to the alignment of bearings of a gyroscope. My method and means for bearing alignment is applicable for insuring alignment of bearings for any rotatable device, e.g., motor shafts, etc. Further, the invention is not restricted as to the type of bearing employed; for example, it is readily suited to insure proper automatic alignment of either ball bearings or sleeve bearings.

IN THE CLAIMS:

Claim 9, line 2, replace "an" with -- a bearing --;
line 3, replace "having a peripheral curved convex surface" with -- receiving member disposed in an opening within such other element, said bearing receiving member initially being orientable within said opening to align it with such other member --;
lines 4-8, cancel the lines in their entirety;
line 9, cancel "purposes;" cancel "said bearing and";
line 10, replace the period with a comma and insert thereafter -- whereby a bearing element inserted in said bearing receiving member is accurately aligned with such other member. --

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REMARKS

The above claims are presented after a careful review of the Grenat patent, the only reference cited against the claims directed to the bearing alignment construction. Applicant is familiar with the Grenat patent and the method of bearing alignment described therein, and the above new claims are believed to patentably distinguish from this patent and describe a new and valuable improvement.

A careful study of the Grenat patent shows that he uses a cylindrical bearing opening 3 (Col. 1, Lines 44 and 45), and places in these openings bearing sleeves 8 that are externally tapered from the wall-engaging portion 9 thereof, preferably uniformly tapered and the taper extending to the end (Col. 1, Lines 52 to 55). The bushing 8 is thus essentially a conical bushing, which may have a small cylindrical portion 9 at the larger end of the cone. This cylindrical portion is the wall-engaging portion that fits within the bearing opening 3. Since the bearing opening is cylindrical, the cylindrical portion 9 of the bushing may be forced all the way through the opening, which in itself is an important distinction from applicant's construction. More important, however, is the fact that when the bushings 8 are held in the bearing openings 3, as by Babbitt metal or similar cementing material, any axial movement of the shaft 4 and consequently of the bushings 8 produces only shear forces in the Babbitt metal, and not any

~~Claim 9, line 10, continued~~

~~other member.~~

Replace claims 18 and 19 with the following new claims:

27. The method of aligning bearings in a support comprising the steps of: providing openings in the support, inserting bearing-receiving members in said openings; adjustably shifting said members in said openings to positions where they are aligned on a common axis; and permanently securing said members in said positions to the support, whereby to insure that bearings will be aligned when received by said members.

28. In the method of bearing alignment in which bearing-receiving members are mated with surfaces in a supporting member, comprising the steps of: placing said bearing-receiving members in contact with the surfaces; relatively shifting said bearing-receiving members and the surfaces to simultaneously align them on a common axis; and permanently securing said bearing-receiving members in their aligned positions to the supporting member.

REMARKS

Favorable reconsideration of the claims is respectfully requested.

Material describing the advantages of Applicant's bearing alignment means and method has been added at page 20. It will be found not to contain any new matter.

Claims 18 and 19 have been replaced with claims 27 and 28, and Claim 9 has been amended, to define Applicant's invention in terms clearly and patentably distinguishable over the references. Each of these claims clearly sets forth a bearing-receiving member or members initially aligned or properly positioned, so that bearings are automatically aligned or positioned as desired when received thereby.

Grenat shows a tapered bearing sleeve which is cemented in the opening. If such bearings have to be replaced, they and the Babbitt material must be removed. Thus, every time replacement bearings are placed over the shaft and inserted in the openings, it is necessary to go through the complete alignment procedure, and thereafter to apply cementing material. Thus, Grenat does nothing different in this connection from other prior art bearing arrangements, and involves just as much time, trouble and expense as the prior art arrangements in replacing bearings. If he used ball bearing arrangements, he would secure his outer race to the frame by the cement, and this would present the same difficulties. Since he does not disclose any separate bearing-receiving member to be aligned and fixed to the frame, he cannot achieve the tremendous advantages of Applicant's claimed combination and method, of insuring the alignment of bearings upon their being received by

the aligned bearing-receiving members.

Accordingly, it is submitted that claims 9, 27 and 28 are clearly allowable over Grenat.

Claims 20 to 26 were rejected over Sperry, the clamping means of which is considered the equivalent of a cemented arrangement. This rejection is not understood, since the outer race 104 is stated therein to be universally mounted on blocks 105 in the frame. Further, the shaft 8 is additionally provided with a thrust bearing 9 at one end, to take up the loading on the shaft. Thus, Sperry's structure is entirely different from that claimed by Applicant. Also, each of claims 20-26 clearly defines a combination wherein the bearings are releasably retained in separate bearing-receiving or support members; such members are permanently secured in the desired positions, thus insuring that the bearings to be supported thereby will be in the desired positions. No such arrangement is remotely suggested by Sperry.

In view of the foregoing, it is believed that a Notice of Allowance is in order, and such is solicited.

Respectfully submitted,

FULWIDER, MATTINGLY & HUNTLEY

By _____
Attorneys for Applicant

WLP:mgj

itially, maintain their alignment perma-

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U. S. PATENT OFFICE

MAY 4 - 1959 2254

DIVISION 12 — PAPER NO. 11

IN THE UNITED STATES PATENT OFFICE

In re Application of:	)	
JOHN S. ADKINS	)	
Serial No. 410,237	)	Division (12)
Filed: February 15, 1954	)	
For: GYROSCOPE	)	

SUPPLEMENTAL AMENDMENT

Hon. Commissioner of Patents

Washington 25, D. C.

Sir:

In further response to the office action of June 20, 1958, please amend the above-identified application as follows:

IN THE CLAIMS:

Please cancel claims 9 and 20-28, inclusive, and substitute the following new claims:

9. ~~29.~~ An apparatus for supporting bearings in aligned relationship which comprises a pair of bearing-receiving elements each providing means to removably support a bearing in a fixed relationship with said element, each of said bearing-receiving elements having a mounting surface by which it may be supported, means for supporting said bearing-receiving elements at opposed relatively spaced positions, said supporting means providing supporting surfaces generally corresponding to said mounting surfaces and permitting said elements to be initially adjustably shifted

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WASHINGTON 25, D. C.

U. S. DEPARTMENT OF COMMERCE
PATENT OFFICE
WASHINGTON

All communications respecting this application should give the serial number, date of filing, and name of the applicant.

PAPER No. 12

Fulwider, Mattingly and Huntley
5225 Wilshire Boulevard
Los Angeles 36, California

Applicant: John S. Adkins	
Ser. No. 410,237	MAILED
Filed February 15, 1954	JUL 21 1959
For GYROSCOPE	PAT DIV 12

10—08437-4 GPO

Please find below a communication from the EXAMINER in charge of this application.

Robert C. Watson
Commissioner of Patents.

Responsive to amendments filed December 22, 1958 and April 30, 1959.

References relied upon:

Barrett	1,912,246	May 30, 1933	74-41x
Barney	1,993,236	Mar. 5, 1935	74-41x
Maier	2,044,536	June 16, 1936	74-41x
De La Mater	2,250,626	July 29, 1941	74-41
Morse	2,570,702	Oct. 9, 1951	74-597x

Claims 1 to 6, 10, 12 and 29 to 41 appear in this application.

Claims 37, 38, and 39 are rejected as being obviously fully met by either of the patents to Barrett or De La Mater.

Claims 40 and 41 are rejected as being fully met by the patent to Morse. The method recited is this claim is the conventional method that would be used to mount the bearing-receiving elements 6 upon the bottom of the boat or the frame members provided for the bottom of the boat.

Claims 1 to 6, 10, 12, and 29 to 36 appear to be allowable.

Claims 37 to 41 are rejected.

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS ACTION IS SET TO EXPIRE OCT 1 1959.

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J. Hinton
Examiner

APPROVED FOR SHORTENED PERIOD
JUL 20 1959
SUPERVISORY EXAMINER

TWShear/pw

relative to said supporting means into oriented positions where said bearing-supporting means are in alignment with each other, and means to retain said bearing-receiving elements in said oriented positions to permit pairs of bearings to be interchangeably mounted in aligned relationship supported by said bearing supporting means.

10. ~~30.~~ An apparatus as recited in claim 9 ~~29~~ wherein the mounting surfaces of said bearing-receiving elements are mounted in contact with said supporting surfaces.

11. ~~31.~~ An apparatus as recited in claim 9 ~~29~~ wherein said supporting surfaces define openings in said supporting means and said bearing-receiving elements are positioned in said openings.

12. ~~32.~~ An apparatus as recited in claim 11 ~~31~~ wherein said supporting surfaces and said mounting surfaces are so formed that said bearing-receiving elements may be inserted in but are restrained against passing through said openings.

13. ~~33.~~ An apparatus as recited in claim 9 ~~29~~ wherein said retaining means permanently and immovably retain said bearing-receiving elements in said oriented positions.

14. ~~34.~~ An apparatus as recited in claim 13 ~~33~~ wherein said retaining means comprise cementing means.

15. ~~35.~~ An apparatus as recited in claim 9 ~~29~~ wherein said mounting and supporting surfaces are cooperating convex and concave surfaces and each of said surfaces is a surface of revolution generated by a curved generatrix.

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16 ~~30~~. An apparatus as recited in claim ~~29~~ 9 further comprising a pair of frictionless bearings supported by said bearing-receiving elements in said fixed relationship with respect thereto.

37. An apparatus for supporting a bearing in an aligned position which comprises a bearing-receiving element providing means to removably support a bearing in a fixed relationship with said element, said element having a mounting surface by which it may be supported, means for supporting said bearing-receiving element, said supporting means providing a supporting surface generally corresponding to said mounting surface and permitting said element to be initially adjustably shifted relative to said supporting means into an oriented position where said bearing-supporting means is positioned to hold a bearing in an aligned position, and means to retain said bearing-receiving element in said oriented position to permit bearings to be interchangeably mounted in said aligned position supported by said bearing-supporting means.

38. An alignable bearing construction which comprises a bearing-receiving element, a bearing removably supported by said element in a fixed relationship with respect thereto, said element having a mounting surface by which it may be supported, means for supporting said bearing-receiving element, said supporting means providing a supporting surface generally corresponding to said mounting surface and permitting said element to be initially adjustably shifted relative to said supporting means into an oriented position where said bearing is held in an aligned position, and means to retain said bearing-receiving element in said oriented position to permit interchangeable mounting of bearings in said aligned position.

39. The method of mounting a bearing-receiving element providing means to removably support a bearing in a fixed relationship with said element and having a mounting surface by which said element may be supported by a support which provides a supporting surface generally corresponding to said mounting surface and permitting said element to be adjustably shifted relative to said supporting means, which comprises the steps of mounting said element on said support with said mounting surface contiguous to said supporting surface, adjusting said element relative to said support to an oriented position where said bearing-supporting means is oriented to hold a bearing in an aligned position, and securing said element in said oriented position to permit bearings to be interchangeably mounted in said aligned position supported by said bearing-supporting means.

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40. The method of mounting a pair of bearing-receiving elements each providing means to removably support a bearing and each having a mounting surface by which mounting surfaces said elements may be supported at opposed relatively spaced positions by a support providing supporting surfaces which generally correspond to said mounting surfaces and permit said elements to be adjustably shifted relative to said support, which comprises the steps of mounting said elements on said support with said mounting surfaces contiguous to said supporting surfaces, adjusting said elements relative to said support to oriented positions where said bearing-supporting means are in alignment with each other, securing said elements in said oriented positions to permit pairs of bearings to be interchangeably mounted in aligned relationship supported by said bearing-supporting means.

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41. The method of mounting a pair of bearing-receiving elements each providing means to removably support a bearing and each having a mounting surface by which mounting surfaces said elements may be supported at opposed relatively spaced positions by a support providing supporting surfaces which generally correspond to said mounting surfaces and permit said elements to be adjustably shifted relative to said support, which comprises the steps of mounting said elements on said support with said mounting surfaces contiguous to said supporting surfaces, simultaneously fixedly holding said elements in alignment on a common axis and moving said elements relative to said support to oriented positions, securing said elements in said oriented positions to permit pairs of bearings to be interchangeably mounted in aligned relationship supported by said bearing-supporting means.--

REMARKS

The courtesy of the examiner at the interview is gratefully acknowledged by applicant's attorneys.

At the interview, it was tentatively agreed that the new claims distinguish patentably from the references of record.

Each of the new claims sets forth a bearing-receiving element which may be initially shifted with respect to a support to properly orient the member so that bearings may be interchangeably mounted in the element in aligned position. Such a construction for aligning bearings and the method of assembling it, as set forth in the method claims, are not shown by any of the references of record, either individually or in combination.

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REFERENCES CITED

The following references are of record in the patented file of this patent:

UNITED STATES PATENTS

Name	Number	Date
Sperry	1,342,397	June 1, 1920
Barrett	1,912,246	May 30, 1933
Barney	1,993,236	Mar. 5, 1935
Maier	2,044,536	June 16, 1936
De La Mater	2,250,626	July 29, 1941
Lane	2,326,784	Aug. 17, 1943
Carlson	2,352,469	June 27, 1944
Cronat	2,531,334	Nov. 21, 1950
Morse	2,570,702	Oct. 9, 1951
Barkalow et al.	2,641,133	June 9, 1953
Slater et al.	2,649,808	Aug. 25, 1953

FOREIGN PATENTS

Country	Number	Date
France	982,948	June 18, 1951
Great Britain	645,896	Nov. 8, 1950
Italy	371,412	Mar. 23, 1939

Tws

OTHER REFERENCES

74

The deficiencies of the references are clearly pointed out in the last amendment and thus will not be repeated here.

In view of the foregoing, it is believed that the case is in condition for allowance and favorable action is courteously solicited.

Respectfully submitted,

FULWIDER, MATTINGLY & HUNTLEY

By Warren L. Patton

Attorneys for Applicant

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AUG - 7 1959
U. S. PATENT OFFICE
AUG 11 1959

DIVISION 12 — PAPER NO. 13

IN THE UNITED STATES PATENT OFFICE

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& oath

In re application of
JOHN S. ADKINS
Serial No. 410,237
Filed: February 15, 1954
For: GYROSCOPE

Patent Division 12

Los Angeles 36, California
August 4, 1959

Hon. Commissioner of Patents
Washington 25, D. C.

Sir:

In response to the Office Action mailed July 21, 1959, please amend the above-identified application as follows:

IN THE CLAIMS

CANCEL claims 37-41, inclusive.

REMARKS

Claims 37-41, inclusive, have been cancelled.

All the claims remaining in this case have been allowed and, accordingly, a Notice of Allowance is respectfully requested.

Enclosed herewith is a Supplemental Oath, executed by the applicant, identifying the subject matter of the amendments of December 22, 1958 and April 30, 1959.

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Respectfully submitted,
FULWIDER, MATTINGLY & HUNTLEY

By _____
Attorneys for Applicant

PET:ag

U. S. PATENT OFFICE

AUG 11 1959

IN THE UNITED STATES PATENT OFFICE

DIVISION 12 — PAPER NO.

In re application of
JOHN S. ADKINS
Serial No. 410,237
Filed: February 15, 1954
For: GYROSCOPE

Patent Division 12

STATE OF CALIFORNIA
COUNTY OF LOS ANGELES } ss.

JOHN S. ADKINS, whose application for Letters Patent for an improvement in GYROSCOPE, Serial No. 410,237, was filed in the United States Patent Office on or about February 15, 1954, being duly sworn deposes and says that the subject matter of the amendments of December 22, 1958 and April 30, 1959 was part of his invention, was invented before he filed his original application, above identified, for such invention; that he does not know and does not believe that the same was ever known or used before his invention thereof, or patented or described in any printed publication in any country before his invention thereof, or more than one year before his application, or in public use or on sale in the United States more than one year before the date of his application, that said invention has not been patented before the date of said application in any foreign country

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Serial No. 410,237

on an application filed by himself or his legal representatives or assigns more than twelve months prior to his application in the United States, and has not been abandoned.

John S. Adkins

John S. Adkins

Subscribed and sworn to before me this 4th day of August, 1959.

Helen J. Sullivan

Notary Public in and for said County and State

(SEAL) [illegible] SEPT. 6, 19[illegible]

PET:ag

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5-26-58

ADDRESS ONLY
THE COMMISSIONER OF PATENTS
WASHINGTON 25, D. C.

U. S. DEPARTMENT OF COMMERCE
PATENT OFFICE
WASHINGTON

All communications respecting this application should give the serial number, date of filing, and name of the applicant.

NOTICE OF ALLOWANCE

The application for patent identified below has been examined and found allowable for issuance of Letters Patent.

	FILING DATE	SERIAL NO.	NO. OF CLAIMS ALLOWED	EXAMINER
	02/15/54	410237	16	S. Spintman
APPLICANT	Adkins, John S., Santa Monica, Calif.			
ASSIGNEE				MAILED Nov. 4, 1959
TITLE OF INVENTION	Gyroscope			

With the allowance of the application the final fee becomes due. This fee is thirty dollars ($30) plus one dollar ($1) for each claim allowed in excess of twenty (20) and must be paid within 6 months from the date of this notice. Failure to remit the final fee will result in the patent being withheld from issue.

As a convenience in remitting this fee, use of the enclosed Form POL-85a is suggested. The final fee will not be received from anyone other than the applicant, his assignee or attorney, or a party in interest as shown by the records of the Patent Office.

If it is desired to have the patent issued to an assignee or assignees, an assignment, together with the fee for recording the same, must be filed in this Office on or before the date of payment of the final fee.

The patent will be issued and forwarded within approximately two months after receipt of the final fee.

By direction of the Commissioner.

Fulwider, Mattingly, et al
5225 Wilshire Blvd.
Los Angeles 36, Calif.

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EXAMINER

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POL-85A
8-30-58

U. S. Department of Commerce
Patent Office

FINAL FEE TRANSMITTAL

This form is provided for convenience in transmitting final fees to the Patent Office. When properly completed it may be used in lieu of a formal transmittal letter. Respondents will note and fill in items numbered 1 thru 6 below. The Final Fee Receipt, in all cases, will be mailed to the address appearing in box at lower left of this form. If desired, use the reverse side of your Notice of Allowance for carbon copy when completing this form.

1. The COMMISSIONER OF PATENTS is requested to apply the accompanying fee to the case identified below, and deliver the patent as indicated.

NOV 3 1959
PATENT OFFICE

11 Nov. 1959
Date

Walter Finnegan
Attorney, Agent or Applicant

NOTE—Final fees will not be received from other than the applicant, his assignee, or attorney, or a party in interest as shown by the records of the Patent Office. Final fees will not be applied to pending applications.

	FILING DATE	SERIAL NO.	NO. OF CLAIMS ALLOWED	EXAMINER
	02/15/54	410237	16	S. Spintman
APPLICANT	Adkins, John S., Santa Monica, Calif.			MAILED Nov. 4, 1959
ASSIGNEE				
TITLE OF INVENTION	Gyroscope			Notice of Allowance Date

2. DEFERMENT: (Indicate below if desired)	3. FEE ENCLOSED
NOV 17 59	7033 AMOUNT 30.00
4. Assignee: (If assigned and name does not appear in the corresponding space above)	$ 30.00

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6.

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IN THE UNITED STATES PATENT OFFICE

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In re application of
JOHN S. ADKINS
Serial No. 410,237
Filed: February 15, 1954
For: GYROSCOPE

Patent Division 12

STATE OF CALIFORNIA
COUNTY OF LOS ANGELES } ss.

JOHN S. ADKINS, of Santa Monica, California, whose application for Letters Patent for an improvement in a GYROSCOPE Serial No. 410,237 was filed in the United States Patent Office on or about the 15th day of February 1954 and formally allowed on the 4th day of November 1959, being duly sworn, deposes and says:

That he has carefully read and considered the subject matter of said application as filed, the various amendments made thereto, and the claims as allowed therein, and that this subject matter was part of his invention, was invented before he filed his original application, above identified, for such invention; that he does not know and does not believe that the same was ever known or used before his invention or discovery thereof, or patented or described in any printed publication in any country before his invention or discovery thereof, or more than one year before his application, or in public use or on sale in the United States for more than one year before the date of his application, that said invention has not been patented in any foreign country on an application filed by him

or his legal representatives or assigns more than twelve months prior to his application in the United States, and has not been abandoned.

Said allowed claims read as follows:

1. In an erecting mechanism for a gyroscope including a rotor member and a gimbal rotatably mounting the rotor, the combination comprising: an unbalanced disc element coaxial with said rotor; means for continuously rotating the disc at a relatively low speed; means secured to the gimbal for stopping the rotation of the disc in a selected position, whereby the unbalanced weight of said disc causes the precession of said rotor; and means responsive to a tilting of the rotor axis from a position normal to the earth's surface for actuating said disc stopping means.

2. In a vertical flight gyroscope including a rotor, an inner gimbal rotably mounting the rotor, an outer gimbal mounting the inner gimbal for rotation about an axis perpendicular to the rotor axis, and a frame mounting the outer gimbal for rotation about an axis perpendicular to the axis of rotation of the inner gimbal, an erecting mechanism for maintaining the rotor axis normal to the surface of the earth comprising: an unbalanced disc member coaxial with said rotor; means for continuously rotating said disc at a relatively low speed, and means secured to said inner gimbal for stopping the rotation of the disc in a selected position in response to a gradual tilting beyond a predetermined amount of the rotor axis away from said normal, whereby a correcting torque acts on

the rotor axis due to the unbalanced weight of said unbalanced disc to bring the axis back to its normal position.

3. The subject matter of claim 2, in which said means for stopping the rotation of the disc comprises a solenoid operated stop member having a plunger adapted to engage the edge of said disc and a gravity operated switch for actuating the solenoid.

4. In a gyroscope including a rotor, an inner gimbal rotatably mounting the rotor, an outer gimbal rotatably mounting the inner gimbal, and a frame rotatably mounting the outer gimbal, a caging mechanism for orienting said gimbals in mutually perpendicular planes comprising: a first cam member having a series of unidirectional stop members thereon and slidably secured to the frame; roller means movably secured to the outer gimbal adapted to be engaged by sliding movement of said first cam member; and a second cam member having a second series of unidirectional stop members thereon and rigidly secured to the inner gimbal adapted to be engaged by said roller means.

5. In a gyroscope including a rotor, an inner gimbal rotatably mounting the rotor, an outer gimbal mounting the inner gimbal for rotation about an axis perpendicular to the rotor axis, and a frame mounting the outer gimbal for rotation about an axis perpendicular to the axis of rotation of the outer gimbal, a caging mechanism for orienting said gimbals in mutually perpendicular planes comprising: a ring cam member slidably secured to the frame having a varying width dimension in the direction of the axis of

rotation of the outer gimbal and having a series of unidirectional stop means thereon; a first roller secured to the outer gimbal offset from said outer gimbal axis and adapted to be engaged by sliding movement of the ring cam; an elongated cam member secured to the mounting shaft of said inner gimbal and having a second series of unidirectional stop means thereon; and a second roller coupled to the first roller and adapted to bear against the elongated cam member, whereby slidably urging the ring cam against the first roller, cams the outer gimbal into a plane perpendicular to the frame, and urging of the second roller against the elongated cam member cams the inner gimbal into a plane perpendicular to the outer gimbal.

6. The subject matter of claim 5, in which the series of unidirectional stop means on the ring cam surface and the elongated cam surface include graded steps acting to prevent the engaging rollers from retrogressing and moving away from the low point of said cam surfaces.

7. (10) In a gyroscope including a rotor, an inner gimbal rotatably mounting the rotor, an outer gimbal mounting the inner gimbal for rotation about an axis perpendicular to the rotor axis, and a frame mounting the outer gimbal for rotation about an axis perpendicular to the axis of rotation of the outer gimbal, the combination comprising: a first cam member having a series of unidirectional stop means thereon and movably secured to the frame; a second cam member having a second series of unidirectional stop means thereon and rigidly secured to the inner gimbal; a cam roller means

movably secured to the outer gimbal; means for moving the first cam member into engagement with the roller means whereby the roller means will be urged against the second cam member, the inner and outer gimbals being cammed into mutually perpendicular planes with respect to each other and said frame; means for retracting the first cam member to free the gimbals; a continuously rotating unbalanced disc coaxial with the rotor and rotating at a relatively low speed; and means secured to said inner gimbal responsive to tilting of the rotor axis for stopping said disc in a selected position.

8. (12) A gyroscope comprising inner and outer gimbals and frame for mounting a rotor element with three degrees of freedom; an unbalanced disc having its axis substantially coinciding at all times with the axis of the rotor; means for continuously rotating the disc in response to rotation of the rotor and at a relatively slow speed; means on the inner gimbal for stopping rotation of the disc in a selected position operative in response to a tilting of the rotor axis from a direction normal to the surface of the earth; a ring cam member slidably secured to the frame; roller means movably secured to the outer gimbal adapted to be engaged by sliding movement of the ring cam member; an elongated cam rigidly secured to the inner gimbal adapted to be engaged by said roller means; and means on each of said cam member preventing movement of said roller away from the low points of said cam members.

CONTENTS

REJECTION SEP [illegible] 1954

REJECTION MAR [illegible] 1957

AMENDMENT

REJECTION JUN 2 1958

JUL 21 1958

Exhibit A-27

Nov. 21, 1950 J. J. GRENAT 2,531,334

ALIGNED BEARING ASSEMBLY

Filed Oct. 31, 1949

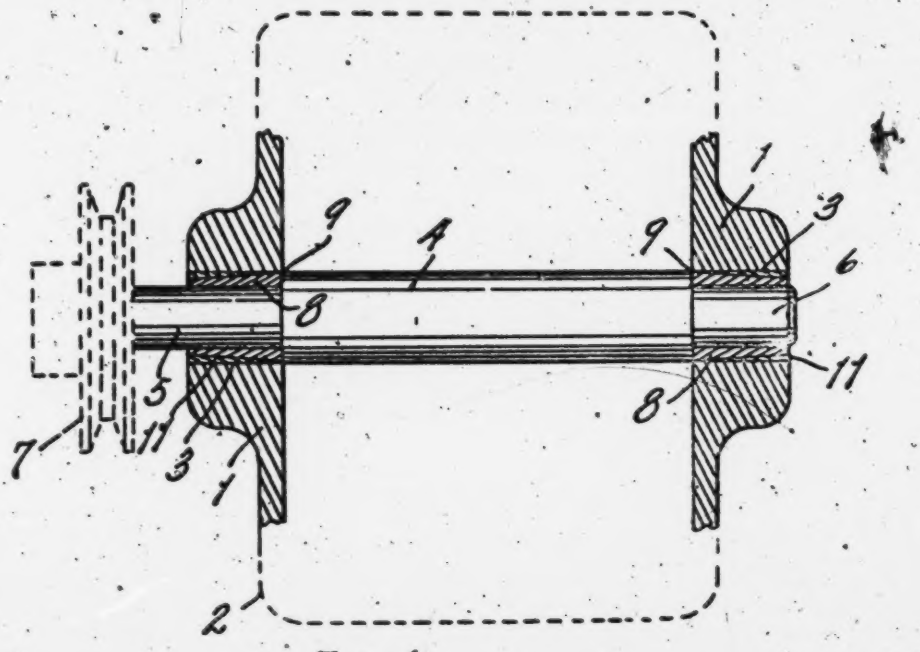


FIG. 1

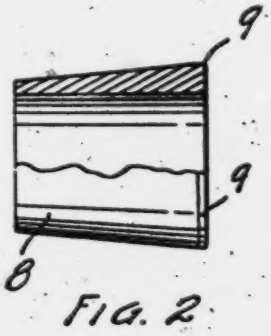


FIG. 2

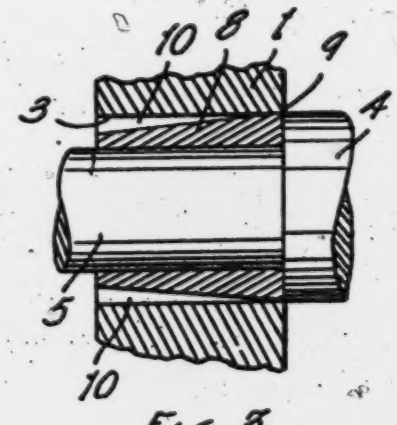


FIG. 3

INVENTOR.
John J. Grenat
BY
Otto A. Earl
Attorney

9. (29) An apparatus for supporting bearings in aligned relationship which comprises a pair of bearing-receiving elements each providing means to removably support a bearing in a fixed relationship with said element, each of said bearing-receiving elements having a mounting surface by which it may be supported, means for supporting said bearing-receiving elements at opposed relatively spaced positions, said supporting means providing supporting surfaces generally corresponding to said mounting surfaces and permitting said elements to be initially adjustably shifted relative to said supporting means into oriented positions where said bearing-supporting means are in alignment with each other, and means to retain said bearing-receiving elements in said oriented positions to permit pairs of bearings to be interchangeably mounted in aligned relationship supported by said bearing supporting means.

10. (30) An apparatus as recited in claim 9 wherein the mounting surfaces of said bearing-receiving elements are mounted in contact with said supporting surfaces.

11. (31) An apparatus as recited in claim 9 wherein said supporting surfaces define openings in said supporting means and said bearing-receiving elements are positioned in said openings.

12. (32) An apparatus as recited in claim 11 wherein said supporting surfaces and said mounting surfaces are so formed that said bearing-receiving elements may be inserted in but are restrained against passing through said openings.

13. (33) An apparatus as recited in claim 9 wherein said retaining means permanently and immovably retain said bearing-receiving elements in said oriented positions.

14. (34) An apparatus as recited in claim 13 wherein said retaining means comprise cementing means.

15. (35) An apparatus as recited in claim 9 wherein said mounting and supporting surfaces are cooperating convex and concave surfaces and each of said surfaces is a surface of revolution generated by a curved generatrix.

16. (36) An apparatus as recited in claim 9 further comprising a pair of frictionless bearings supported by said bearing-receiving elements in said fixed relationship with respect thereto.

John S. Adkins

Subscribed and sworn to before me this 14th day of December, 1959.

Notary Public in and for said County and State

My Commission Expires February 2, 1960

PET:ek

March 22, 1955 C. F. SCHWAN 2,704,693

RADIALLY ADJUSTABLE BEARING SUPPORT

Filed April 28, 1950 2 Sheets-Sheet 2

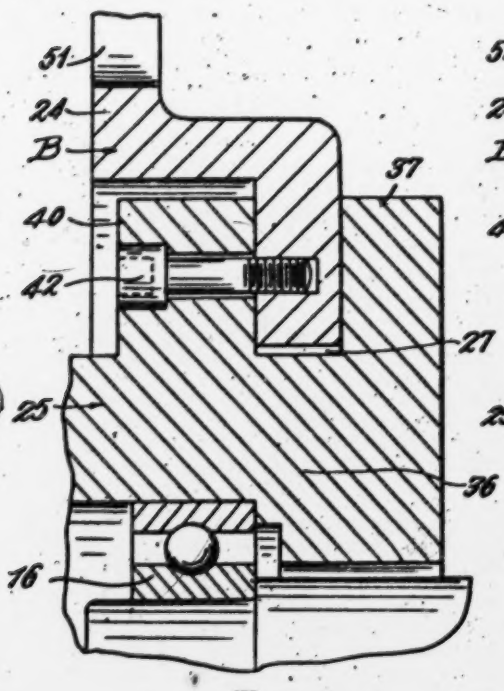


FIG. 3

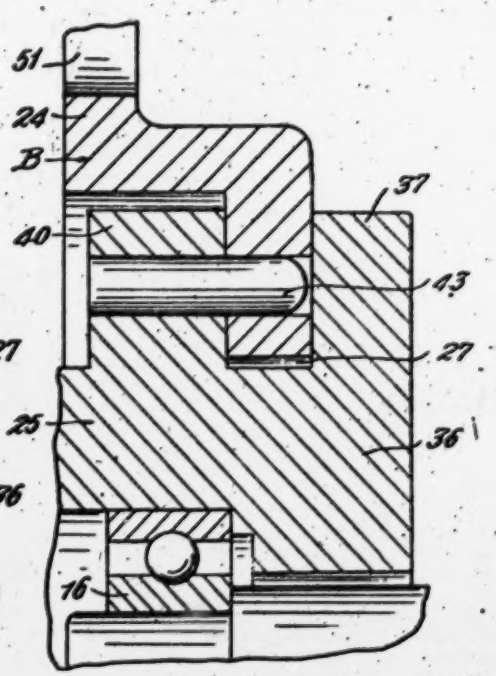


FIG. 4

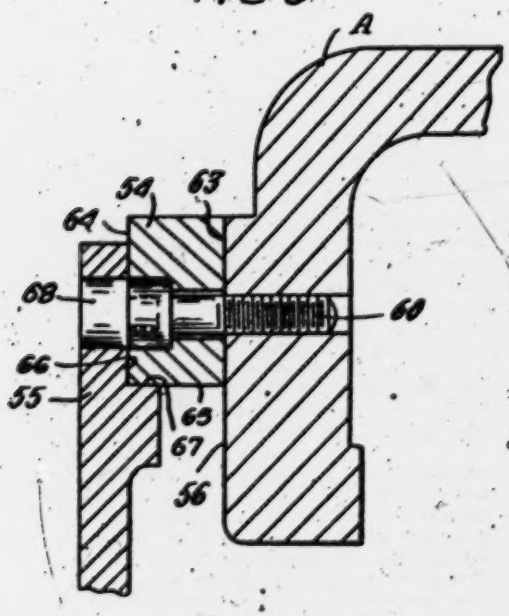


FIG. 5

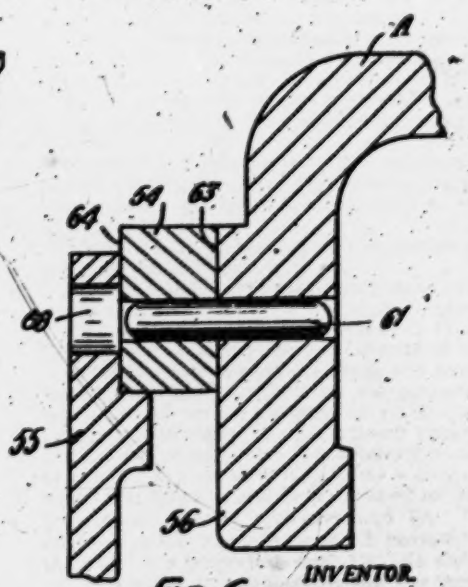


FIG. 6

INVENTOR.
BY CLARENCE F. SCHWAN
Alfred C. Body
ATTORNEY

Exhibit Y

210 Split Rock Road
Syosset, L.I., New York
November 23, 1962

Beilenson, Meyer, Rosenfeld & Susman
Citizens National Bank Bldg.
9350 Wilshire Boulevard
Beverly Hills, California

Dear Sirs:

I have carefully read the deposition of John Schoeppel concerning John Adkins vs. Lear, Inc. and am returning the copy herewith.

My own recollections of events taking place in the 1952 through 1954 years correspond roughly to Mr. Schoeppel's, with one basic exception: I believe I introduced the "cemented bearing cups using a mandrel" procedure to the Lear Steel Gyro back in 1953. I was Project Engineer of the Steel Gyro Development program at that time. When it became desirable to cement the bearing cups in place, I resorted to the procedure then common in the aircraft industry for manufacturing tooling jigs and fixtures. The alignment was maintained by a precision ground arbor or mandrel while the cement or other low melting point metal such as solder hardened in place. This procedure had been known to me for many years, and although it had not been used in gyro construction, so far as I knew, I considered it "old art" and of no particular significance. The detailed description of the procedure is contained in Lear Drawing SH-1040, which is referenced in the Plaintiff's Exhibit Print Lear Drawing No. 105347, dated 9-3-54, on Gyro Model 2153A. I also have in my possession Lear Drawing No. 101478, dated 8-21-53, on the previous Lear Model 2151A Gyro which also contains the cementing procedure Reference Drawing SH-1040. Unfortunately, I have been unable to find a copy of SH-1040 whose dates would probably clear the whole matter up conclusively.

While Mr. Schoeppel apparently was acquainted with Mr. Adkins prior to his employment at Lear, I was not and had no opportunity to consult with Mr. Adkins on any gyro problems until two or more years into the Steel Gyro Development program, at which time the detail configurations had been thoroughly established.

In view of the fact that I cannot support my personal recollections beyond that which I have indicated, and as the whole subject took place quite awhile ago, I do not believe I can be of further help in this matter.

Very truly yours,

L.E.C.

Loren E. Currieton

Patented Nov. 21, 1950 2,531,334

UNITED STATES PATENT OFFICE

2,531,334

ALIGNED BEARING ASSEMBLY

John J. Grenat, Detroit, Mich.

Application October 31, 1949, Serial No. 124,611

5 Claims. (Cl. 308—15)

1

This invention relates to improvements in aligned bearing assemblies.

The main objects of this invention are:

First, to provide a self aligning sleeve bearing or bushing assembly which permits very rapid installation with the axially spaced bearing sleeves or bushings for a shaft in perfect alignment.

Second, to provide a method for aligning bearings which avoids the necessity of reaming when new bearing sleeves or bushings are installed.

Third, to provide a structure which avoids the necessity for assembling and disassembling a machine, such for example as a motor, when it is being provided with new bushings or bearing sleeves, such assembling and disassembling being usually required where the commonly practiced methods are followed.

Fourth, to provide a method of aligning shaft bearings which may be practiced by relatively unskilled workmen.

Objects relating to details and economies of the invention will appear from the description to follow. The invention is defined and pointed out in the claims.

A preferred embodiment of the invention is illustrated in the accompanying drawing, in which:

Fig. 1 is a fragmentary plan view of parts of a bearing assembly embodying my invention, the bearing pedestals or supports and the bearing sleeves or bushings being shown in horizontal sections and the shaft being shown as provided with a pulley shown by dotted lines.

Fig. 2 is a fragmentary view partially in longitudinal section of one of the bearing sleeves or bushings.

Fig. 3 is an enlarged fragmentary view partially in section illustrating one of the steps of assembling and aligning the bearings.

In the accompanying drawing, 1 represents the bearing pedestals or bearing supports of a motor or the like, the base of which is indicated by dotted lines 2. The supports 1 are provided with cylindrical bearing openings 3. The shaft 4 is provided with journals 5 and 6, the journal 5 being extended to receive the pulley 7. Each journal is provided with a bearing sleeve or bushing 8 having a portion 9 at one end thereof, desirably the inner end, adapted to tiltingly and supportingly fit in the bearing opening.

The bearing sleeves 8 are externally tapered from the wall engaging portion 9 thereof, preferably uniformly tapered, and the taper extending to the end. In assembling the sleeves or bush-

2

ings 8 are assembled on the journals of the shaft and within the bearing openings 3. As the bearing sleeves are tiltingly supported at 9 they automatically assume an aligned position, after which the annular space 10 between the wall of the bearing opening or bore and the sleeve is filled with a nonshrinking quick setting material 11, such for example as Babbitt metal, which can be poured or compressed into the space in supporting and retaining engagement with the sleeves, thereby facilitating fixedly supporting the sleeves in their aligned positions.

In the event of renewal of the sleeve being required, the sleeves can be withdrawn and new sleeves inserted. This work can be done by a comparatively unskilled workman.

The applicant is aware that patents have been issued on so-called self-aligning bearings but he is not aware of any structure or methods such as is the subject matter of this invention. The applicant's method and assembly avoids the necessity of reaming and like machine or tool operations and the necessity for equipment of various sized reaming tools. The sleeves or bushings of applicant's assembly have full bearing engagement with the shaft inasmuch as they are by my method self-aligning when installed.

I have illustrated and described my invention as applied to a simple assembly of bearing or supporting pedestals and shaft but it should be understood that my invention is not confined to any particular field but may be used to advantage to various equipments and machines where bearing sleeves or bushings are employed.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. The combination with bearing supports having aligned cylindrical bearing openings therein, a shaft provided with journals, and bearing sleeves rotatably receiving and supporting said journals, said sleeves having axially restricted portions thereof at one end in initially tiltingly supported engagement with the bearing openings and being externally tapered from such restricted portions, the annular spaces between the tapered portions of the sleeves and the walls of the bearing openings being filled with material fixedly supporting the sleeves in aligned position.

2. The combination with bearing supports having aligned cylindrical bearing openings therein, a shaft, and externally tapered bearing sleeves rotatably receiving and supporting said shaft, said sleeves at one end thereof being in peripheral supporting initially tilting engage-

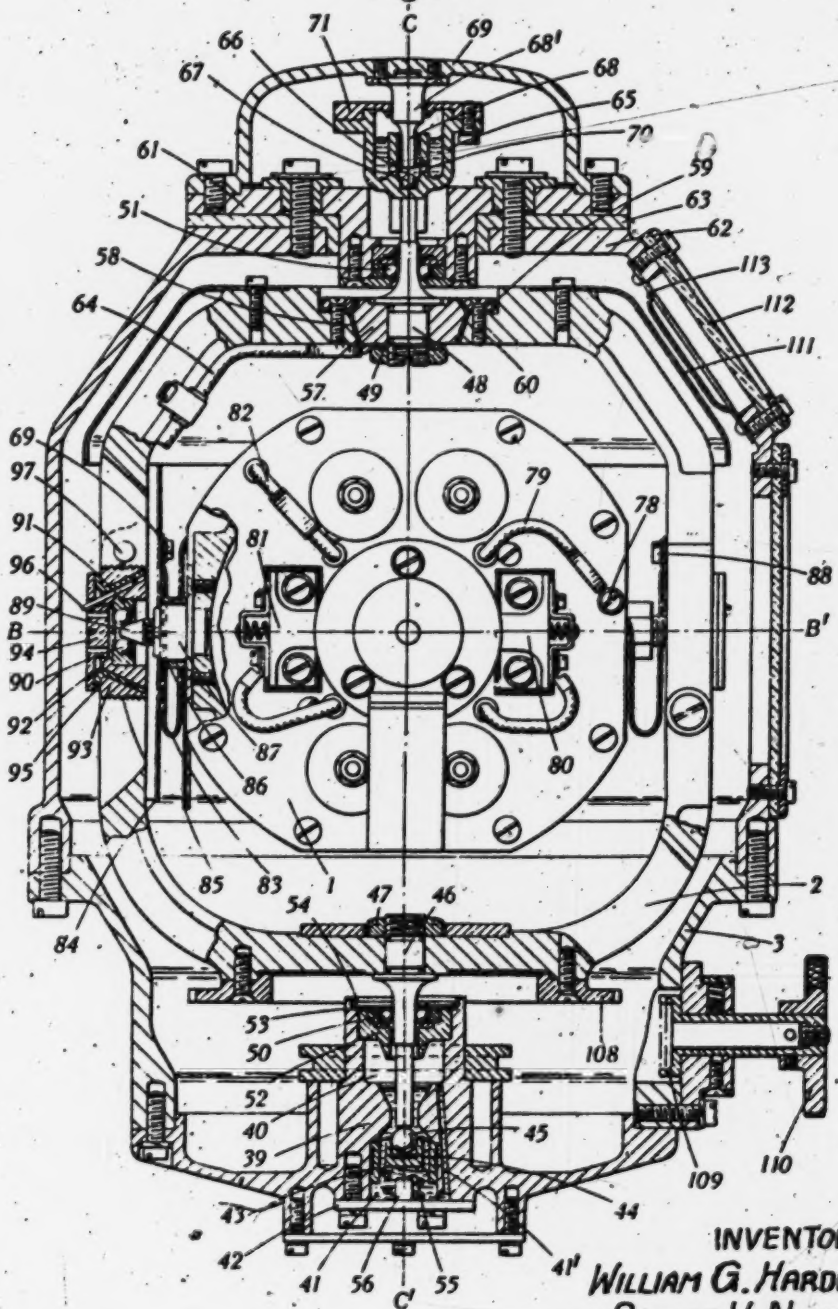
Exhibit A-34

Jan. 6, 1942. W. G. HARDING ET AL 2,269,103

GYROSCOPIC INSTRUMENT

Filed June 16, 1938 6 Sheets-Sheet 1

Fig. 1.



INVENTORS
WILLIAM G. HARDING
ROBERT H. NISBET
BY
Herbert H. Thompson
THEIR ATTORNEY

ment with the bearing openings, the annular spaces between the sleeves and the walls of the bearing openings being filled with material fixedly supporting the sleeves in aligned position.

3. The combination with bearing supports having aligned bearing openings therein, a shaft, and bearing sleeves rotatably receiving and supporting said shaft, said sleeves having axially restricted portions thereof at one end in initially tiltingly supported engagement with the bearing openings and being of reduced section from such wall engaging portions facilitating the aligning thereof, the spaces between the reduced section portions of the sleeves and the walls of the bearing openings being filled with non-yieldable material fixedly supporting the sleeves in their aligned positions.

4. The combination with bearing supports having aligned bearing openings therein, a shaft, and externally bearing sleeves rotatably receiving and supporting said shaft, said sleeves at one end thereof being initially in peripheral supporting tilting engagement with the bearing openings facilitating the aligning of the sleeves, the annular spaces between the sleeves and the walls of the bearing openings being filled with

material fixedly supporting the sleeves in their aligned position.

5. The combination with a support having a cylindrical bearing opening therein, a shaft, and a bushing rotatably receiving and supporting said shaft, said bushing having a portion at one end thereof in initially supporting tilting engagement with the bearing opening facilitating the aligning thereof and being externally tapered from such portion, the annular space between the bushing and the wall of the bearing opening being filled with non-shrinking material fixedly supporting the bushing in its tiltingly adjusted position.

JOHN J. GRENAT.

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The following references are of record in the file of this patent:

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March 22, 1955 C. F. SCHWAN 2,704,693

RADIALLY ADJUSTABLE BEARING SUPPORT

Filed April 28, 1950 2 Sheets-Sheet 1

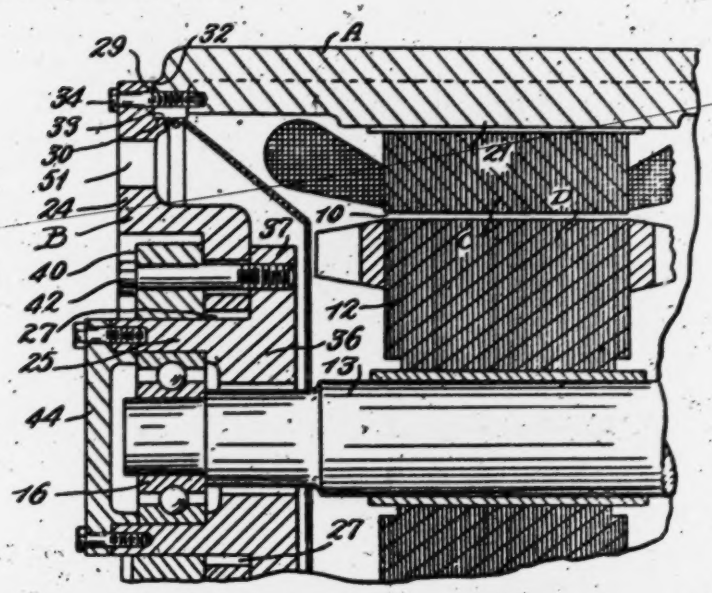


FIG. 1

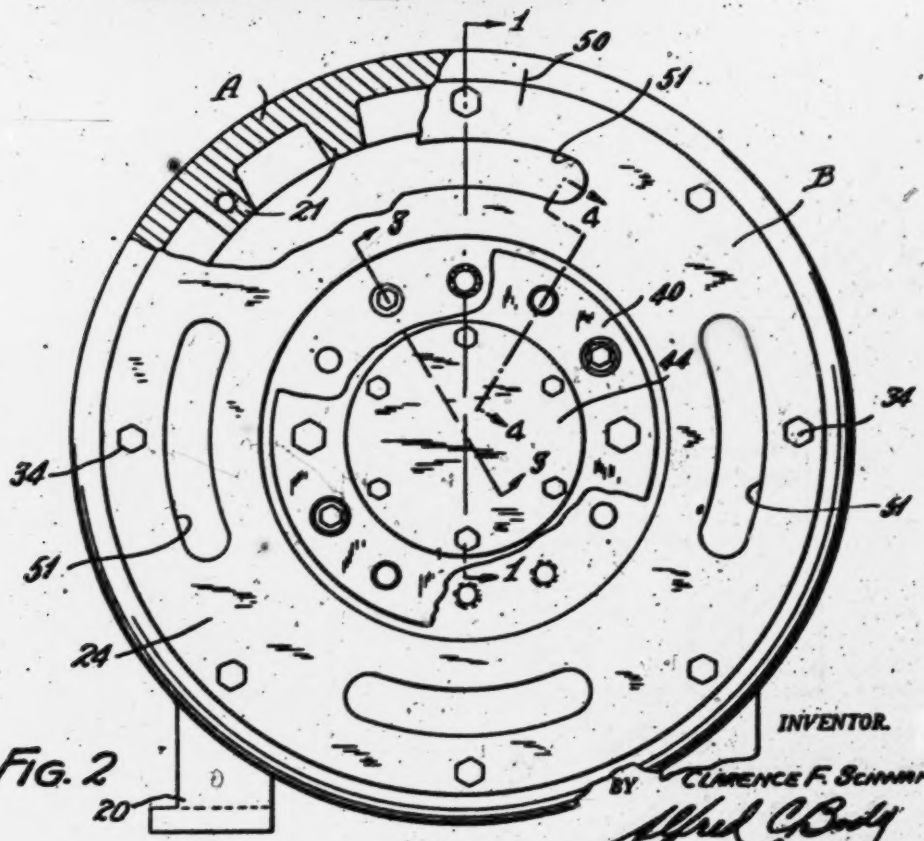


FIG. 2

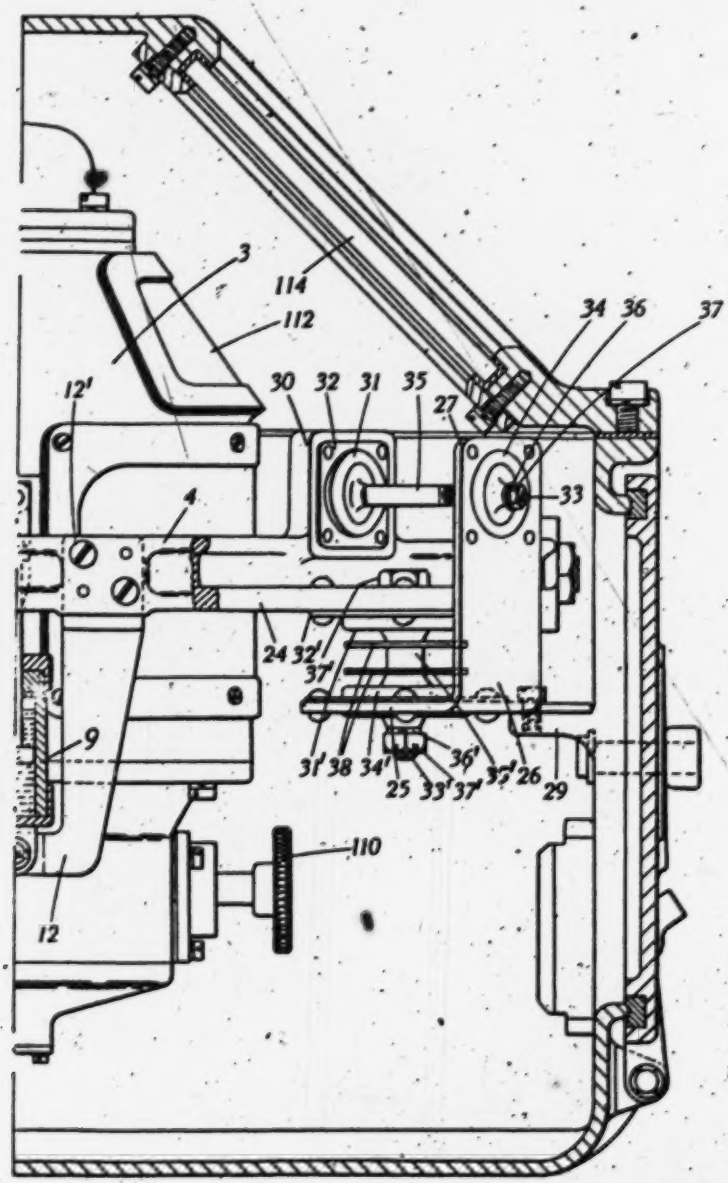
INVENTOR.
CLARENCE F. SCHWAN
BY Alfred C. Body
ATTORNEY

Jan. 6, 1942. W. G. HARDING ET AL 2,269,103

GYROSCOPIC INSTRUMENT

Filed June 16, 1938 6 Sheets-Sheet 3

Fig. 2A.



INVENTORS
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ROBERT H. NISBET
BY
Herbert H. Thompson
THEIR ATTORNEY

United States Patent Office

2,704,693

Patented Mar. 22, 1955

2,704,693

RADIALLY ADJUSTABLE BEARING SUPPORT

Clarence F. Schwan, Warrensville Heights, Ohio, assignor to The Ohio Crankshaft Company, Cleveland, Ohio, a corporation of Ohio

Application April 28, 1950, Serial No. 158,829

4 Claims. (Cl. 308—22)

This invention pertains to the art of electric motors and generators and, more particularly, to the outer shell for housing such equipment and the method of constructing same.

The invention is particularly adaptable to motor generators of the high-frequency alternator type and it will be described with reference to such generators, although it is not so limited.

Such motor generators normally comprise a motor and alternator all located within a multipiece shell, including a housing member for the stator winding and a pair of end bells, one at each end of the housing which positions the rotor relative to the stator and support it for rotation.

One important factor in the performance of a high-frequency alternator is the clearance between the surfaces of the rotor and the surfaces of the stator. The smaller the clearances are, the smaller the machine can be for a given power output and the higher the efficiency will be. As these clearances become smaller and smaller, the problem of adjusting and maintaining the clearances; that is, the alignment of the rotor relative to the stator, becomes of prime importance. The control of these clearances is so critical and so important that conventional manufacturing tolerances on metal parts is insufficient to insure that the clearance will be satisfactory upon assembly of the parts. It is customary, therefore, to adjust the clearances upon assembly of the motor-alternator set and then to make this adjustment permanent. Heretofore, in order to accomplish this adjustment, the housing and end bells have been so formed that they may be relatively adjusted radially of the axis of rotation. A machine is assembled, the end bells adjusted so as to provide the proper clearance of the rotor to the stator and then the end bells are securely bolted to the housing member. To further secure the permanence of this adjustment, it is normally conventional to drill the end bell and the housing and insert tight-fitting dowels into these drilled openings.

Such a construction and method of assembly has proven satisfactory within the manufacturing establishment of the manufacturers. However, in the event the end bell must be removed for any reason, such as maintenance of the bearings, repairs or otherwise, the dowels become bent or otherwise distorted so that the replacement of the end bell in the exact relative position that it was in before removal becomes almost an impossibility. It has, accordingly, become necessary in the field to realign the rotor relative to the stator, drill new holes and insert new dowel pins in these holes. This is a difficult operation to perform in the field and is expensive.

The present invention contemplates a shell construction, for equipment of the type referred to, which obviates all of the above difficulties and enables a fixed adjustment upon initial assembly for accurately aligning the rotor relative to the stator; but which, in addition, permits disassembly and reassembly of the housing and end bells with automatic and inherent realigning of the rotor relative to the stator.

In accordance with the present invention, the shell is assembled from a housing member for the stator and end bells, each formed of at least two members, the members of each end bell and the housing member being so constructed and arranged that a pair of the members may be disassembled and reassembled with accurate radial realignment while the other member and one of the pairs are radially adjustable in a fixed and generally permanently assembled manner.

In accordance with a preferred embodiment of the invention, a housing member is provided which is relatively conventional in structure and supports the stator. A pair of end bells are provided, one for each end of the housing, which support the rotor relative to the stator. A third member is mounted between the housing member and end-bell member and is in the shape of a ring having flat radial surfaces engaging similar flat radial surfaces on the end of the housing member. This ring is radially adjustable relative to the housing and is fixed in any adjusted position by suitable means such as dowels and/or threaded bolts. The end-bell member has outwardly-facing, circumferentially-extending surfaces which engage complementary, oppositely-facing, circumferential surfaces on the ring which serve to accurately align and position these two members radially upon assembly or reassembly. These members are held in assembled relationship by suitable means such as threaded bolts.

In accordance with an alternative embodiment of the invention, the ring and housing may have circumferentially-extending, complementary mating surfaces for accurately positioning these two members relative to each other upon each assembly. The end-bell member which supports the rotor itself then has flat radial surfaces engaging similar flat radial surfaces on the ring member so as to be radially adjustable relative thereto. Dowels and threaded bolts then fixedly retain the two members of the end bell in any adjusted position.

An object of the invention is the provision of a new and improved shell construction for equipment of the type referred to wherein provision is made for adjusting and aligning the rotor relative to the stator upon the initial assembly and, subsequently thereto, the shell may be disassembled for reassembly without the need for realigning the rotor and stator.

Another object of the invention is the provision of a new and improved shell construction for equipment of the type referred to, including a first and second member having mating complementary surfaces so as to insure exact duplication of relative position of the two members upon disassembly and reassembly and a third member fixedly adjusted relative to the second.

The invention may be embodied in a number of different arrangements and combination of parts but preferred embodiments of such parts and arrangement of parts will be described hereinafter in this specification and illustrated in the accompanying drawing which is a part hereof, and wherein:

Figure 1 is a fragmentary, side sectional view of one end of a motor-alternator apparatus embodying the present invention and taken approximately on the line 1—1 of Figure 2;

Figure 2 is an end view partly in section of the equipment shown in Figure 1;

Figures 3 and 4 are fragmentary sectional views taken on the line 3—3 and 4—4 of Figure 2 respectively.

Figures 5 and 6 are views similar to Figures 3 and 4 but showing an alternative embodiment of the invention.

Referring now to the drawings, the motor-alternator equipment, which is shown for the purposes of illustration only and not for the purposes of limitation, includes an outer shell made up of a housing member proper A and end-bell members B. A generator stator C is mounted in the housing member A and has a central bore 10 in which a generator rotor D is mounted in the end bells B for rotation coaxial with the bore 10. The rotor includes a stack of laminations 12 mounted centrally of the ends of a supporting shaft 13. As shown, the stack of laminations 12 substantially fills the bore 10 and the outer surface of the laminations closely approaches the inner surface of the stator C. This clearance between the rotor and stator is preferably held to a minimum and maintained uniform around the entire periphery of the bore 10. The ends of the shaft 13 are reduced in diameter and a ball bearing 16 fits over the end of the shaft and is, in turn, mounted in the end bell B as will be subsequently explained.

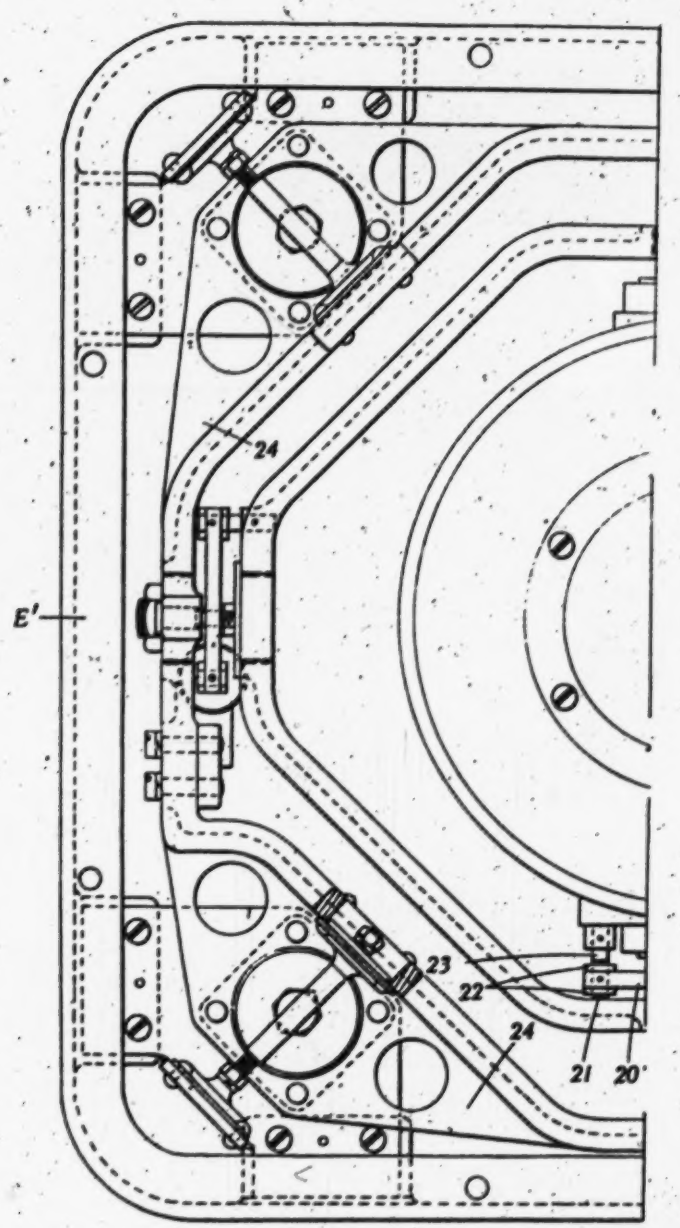
The housing member A is generally a hollow cylinder having a length and internal diameter sufficient to receive the stator and its associated equipment. Preferably, the

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Fig. 3.



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housing member is made of a cast metal, although it may be fabricated by welding from steel plate. Mounting feet 20 are provided externally thereof so that the equipment may be fastened securely to a base support. The interior surface of the housing member A preferably has a plurality of longitudinally-extending ribs 21 to which the stator C is affixed, the ribs 21 providing cooling passages between the housing A and the outer surface of the stator C.

The end-bell members, of which there are two, are fastened to each end of the housing member A. As these members are identical in construction, only one is shown and only one will be described in detail. The end bell B is comprised of two members, an outer member 24 and an inner member 25. In this embodiment, the outer member and the housing member are so formed relative to each other that they have accurately interfitting or mating surfaces so that the outer member and the housing member may be readily assembled and disassembled into substantially, exactly-the-same, relative position. Thus, the outer member has a rabbet in its outer periphery forming a flat radial surface 29 and an outwardly-facing, circumferentially-extending surface 30. In a like manner, the ends of the housing have a flat radial surface 32 which abuts the surface 29 and an inwardly-facing, circumferential surface 33 which abuts the surface 30.

The criterion for the mating surfaces 29, 32 and 30, 33 is that when the outer member 24 and the housing member A are assembled, the abutting surfaces so coact and mate with each other so as to accurately position the outer member 24 relative to the axis of the bore 10 of the stator C. In practice, the surfaces 30, 33 may form an interference fit. Thus, the maximum of accuracy is insured upon reassembly. A continuous peripheral surface is not necessary. Flat surfaces or taper pins may also be employed for aligning these members.

A bolt 34 passes through openings in the member 24 and is threaded into the housing A. The openings are, preferably, oversize relative to the bolts 34 to facilitate insertion of the bolts. The bolts perform no function other than holding the members in assembled relationship.

The inner member 25 is so formed as to be adjustable in a plane perpendicular to the axis of rotation relative to the outer member and, when finally adjusted, to be fixed in this adjusted position by any suitable means. In the embodiment shown, the inner member comprises a sleeve portion 36 which extends through a central opening 27 in the outer member 24 and a flange 37 which extends radially outwardly and overlaps the inner periphery of the outer member 24. As shown, the outer diameter of the sleeve 36 is substantially less than the inner diameter of the bore 27. Thus, the inner member 25 is capable of considerable radial adjustment relative to the outer member 24. As shown, the flange 37 is positioned interiorly of the shell on the outer member 24. A ring 40 is positioned on the opposite side of the member 24 from the flange 37. This ring 40 has an inner diameter substantially equal to the outer diameter of the sleeve 36. The ring 40 and the inner member 25 when they have been adjusted to the desired relative position, are fixed relative to each other. This may be accomplished by the bolts 42 shown or dowels 43 may be employed through the ring 40 or the flange 37 or both, or the members may be welded into a unitary construction. In the event dowel pins are used, the bolts may pass through oversize openings.

The sleeve 25 is also counterbored on the inside to receive the bearing member 16. A cap 44 is provided on the end of the inner member 25 for covering over the end of the shaft 13 and the bearing 16. This prevents dirt from entering this area.

The invention also contemplates an improved method of motor assembly.

To assemble the motor alternator shown in the drawings in accordance with the invention, the rotor D is first positioned interiorly of the stator C. Shims are positioned between the rotor D and the stator C to accurately provide an even, uniform clearance around the entire periphery of the rotor. If any sag or bending of the shaft 13 is contemplated when the shims are removed and the weight of the rotor is borne by the bearings 16, the thickness of the shims on the lower side may be increased a desired amount to compensate for this contemplated sag. The end bell B, comprised of the inner and outer members 25 and 24 in loose assembled relationship, are then assembled with the housing A and the bolts 34 put into position. Because of the mating surfaces, the outer member 24 and the housing member A fit up into an accurate predetermined position. Subsequently, the bolts 42 are positioned to firmly clamp the inner and outer members 25 and 24 into fixed assembled relationship. If desired, the members may be drilled and dowel pins 43 inserted to further insure that this adjustment will not be disturbed accidentally. When this operation has been completed, the shims may be removed through suitable openings 51 in the end bell and the machine is then ready for operation. In the event there is any need for access to the interior of the equipment, it is only necessary to remove the bolts 34 and remove the end bell B as a unitary assembly and preserving the doweled adjustment. When the repair work is finished, the end bell may be quickly reassembled with the housing without need of further steps to align the rotor with the stator. Preferably, some locating means such as indicia 50 are provided for locating the circumferential position of the end bell relative to the housing A. The equipment is then ready for operation.

Figures 5 and 6 show one possible alternative arrangement of a shell construction embodying the present invention. In the embodiment shown in Figure 5, the end bell is comprised of an outer member 54 and an inner member 55, the inner member receiving the bearing 16 and supporting the rotor shaft 13. In this embodiment, the end of the housing A has a flat radial surface 56. The outer member 54, which is generally in the shape of a ring, has a pair of flat radial surfaces 63 and 64, the flat surface 63 abutting against the surface 56 of the housing A. Thus, it will be seen that the outer member 54 is so formed and constructed relative to the housing A that it can be adjusted radially relative thereto. The member 54 also has an inner peripheral, circumferentially-extending surface 65. The inner member 55 has a rabbet formed in its outer periphery providing a flat radial surface 66 and an outwardly-facing, circumferentially-extending surface 67. The diameter of the surface 67 is such as to accurately mate with the surface 65 on the outer member 54. The relative construction of these two members is such that the inner member 55 may be readily assembled, disassembled and reassembled with the ring 54 into exactly the same radial position.

In this embodiment, the members 54 and 55 are assembled and then this assembly is fitted as a unit to the end of the housing A. The member 54 is held in assembled adjusted relationship with the housing A by means of threaded bolts 60 which extend through loose fitting openings in the member 54 into threaded engagement with an opening in the housing A. Also, for accurately maintaining the relative adjusted position of the outer member 54 and the housing A, dowel pins 61 are tightly fixed into aligned openings in the two members. These last mentioned openings are, preferably, drilled when the final adjustment of the stator relative to the rotor has been made. To facilitate the drilling of these openings and the insertion of the screws 60, the inner member 55 is provided with a plurality of large holes 68 aligned with the axis of the bolt 60 and the pins 61.

It will also be appreciated that a construction of this type could be employed wherein the ring 54 has circumferentially-extending surfaces which mate with similar surfaces in the housing A and the inner member 55 is radially adjustable relative to the member 54.

Thus, it will be seen that preferred embodiments only of the invention have been described. Other embodiments of the invention will readily occur to others upon a reading and understanding of this specification. For example, other means may be provided for accurately locating two of the members relative to each other upon reassembly. The exact means employed is relatively unimportant so long as the assembly of the members can be done readily and easily with surety of accurate positioning. All errors of machining of the mating surfaces will have been compensated for by the relative adjustment of two other members in the initial assembly of the equipment.

In the specification, reference has been made to a unitary housing A and a multipiece end bell B. It will be appreciated that one of the members of the end bell could instead actually be a part of or forming extension of the housing without departing from the spirit of the invention.

Having thus described my invention, I claim:

1. In an electric motor, generator, and the like, including a rotor and a shell supporting a stator, that improvement which comprises a radially adjustable bearing support supporting said rotor, said support including a pair of relatively radially adjustable rings and means accessible from outside the motor for fixedly positioning said rings in an adjusted position one of said rings being disposed relatively radially inward of the other, the inner ring being the direct bearing support for the rotor and the other ring being detachably connected to the shell, said other ring and the shell having means including coacting surfaces for insuring assembly and reassembly into the same exact relative position.

2. The device as set forth in claim 1 wherein said last-named means also includes circumferential indicia.

3. In an electric motor, generator, and the like, including a rotor and a shell supporting a stator, that improvement which comprises a radially adjustable bearing support supporting said rotor, said support including a pair of relatively radially adjustable rings and securing means including dowel means accessible from outside the motor for fixedly positioning said rings in an adjusted position, one of said rings being disposed relatively radially inward of the other, the inner ring being the direct bearing support for the rotor and the other ring being detachably connected to the shell, said other ring and the shell having means including coacting surfaces for insuring assembly and reassembly into the same exact relative position.

4. In an electric motor, generator and the like, including a rotor and a shell supporting a stator, that improvement which comprises a radially adjustable bearing support supporting said rotor, said support including a pair of relatively radially adjustable rings having radially extending, flat, overlapping surfaces in engagement with each other and means extending through each of said surfaces and accessible from outside the motor for fixedly positioning said rings in an adjusted position upon final assembly, one of said rings being disposed relatively radially inward of the other, the inner ring being the direct bearing support for the rotor and the other ring being detachably connected to the shell, said other ring and the shell having means including coacting surfaces for insuring assembly and reassembly into the same exact relative position.

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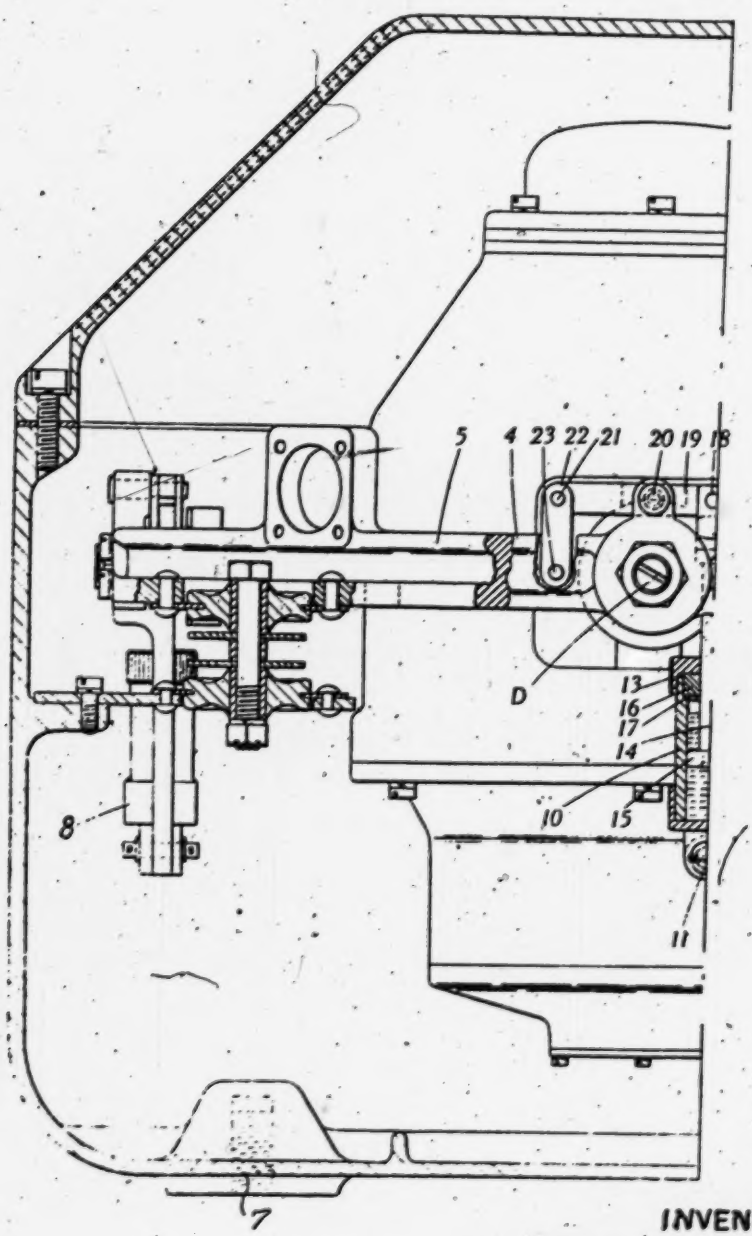
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Fig. 2.



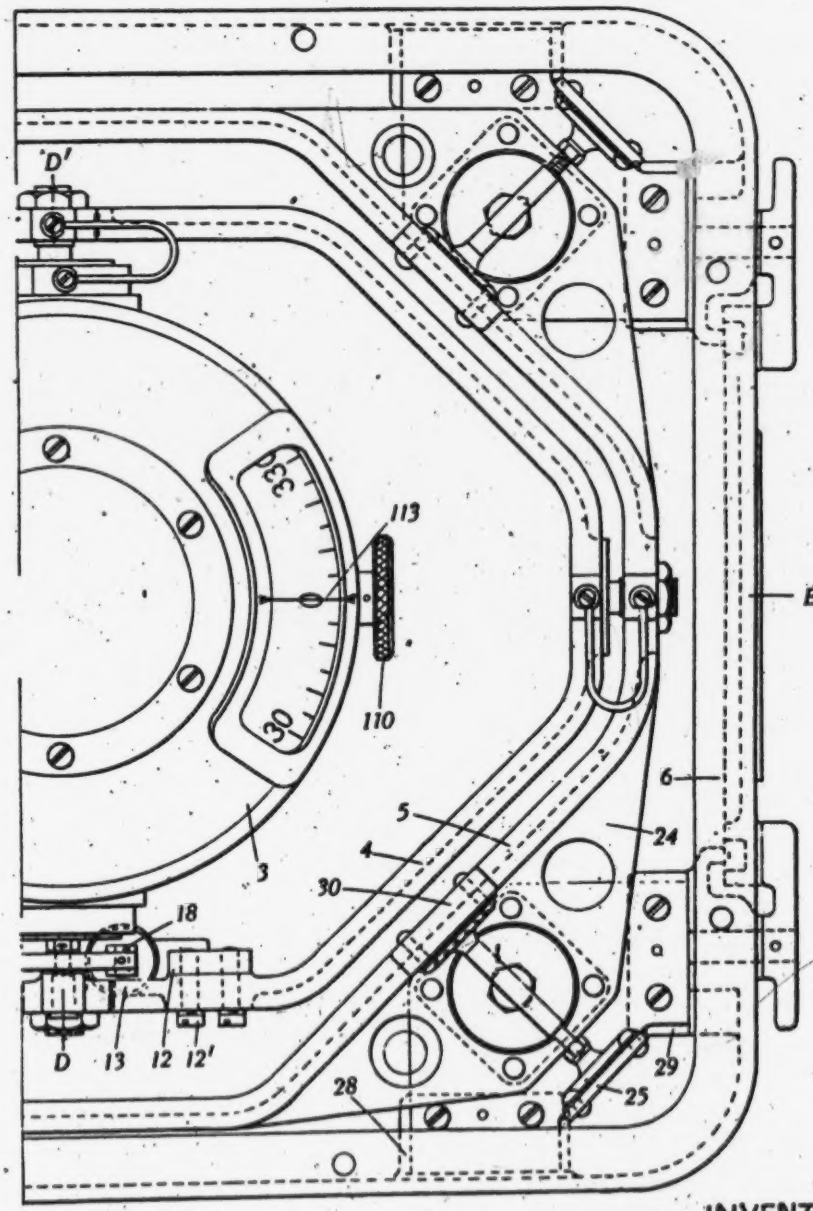
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GYROSCOPIC INSTRUMENT

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Fig. 3A.



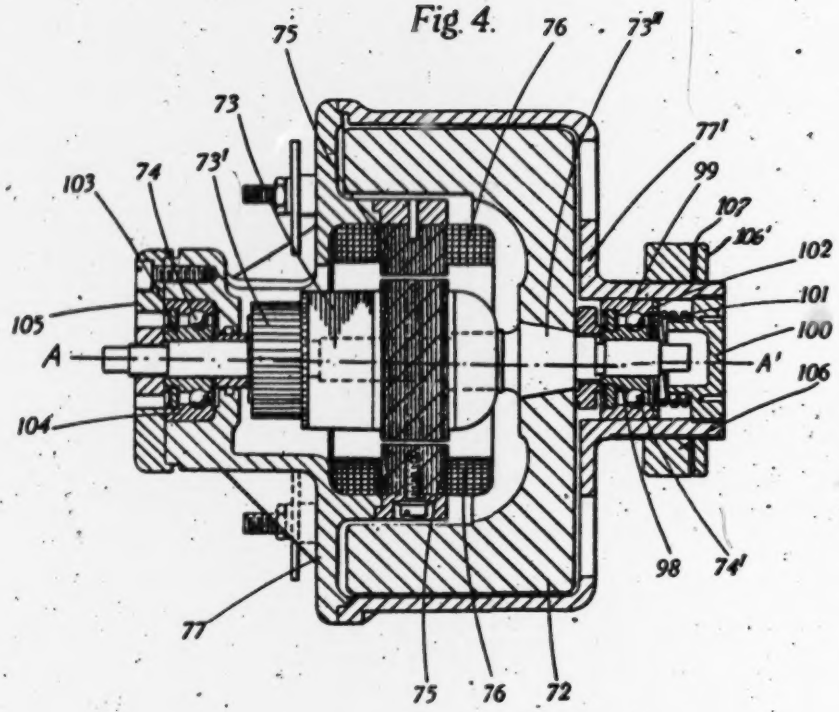
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Fig. 4.



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UNITED STATES PATENT OFFICE

2,269,103

GYROSCOPIC INSTRUMENT

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Application June 16, 1938, Serial No. 213,988
In Great Britain June 17, 1937

2 Claims. (Cl. 308—184)

This invention is concerned with improvements in gyroscopic apparatus generally, but particularly in gyroscopic instruments for use in land vehicles such as tanks. In tanks magnetic compasses are unsteady and quite erroneous, while gyroscopic compasses are impracticable, so that reliance must be made on a directional, or azimuth, gyro as the direction giving instrument. A directional gyro for use in tanks should therefore remain constant in direction or drift only very slowly for long periods of time. However, if directional gyros for tanks are employed of the same basic design as those used in aircraft they are found to be less accurate than in aircraft, owing to the fact that certain conditions inimical to good performance are present to a much higher degree of magnitude in land vehicles than in aircraft as the latter are normally used.

It follows that the measures described below, although specifically devised to improve the accuracy of instruments in land vehicles, can also be applied with advantage to aircraft instruments.

Directional gyros and gyroscopic meridian-seeking compasses are characterised by the use of a gyro with axis normally horizontal or approximately horizontal. The rotor shaft is carried in bearings in a bearing ring or rotor case, which is pivoted about a horizontal axis in a vertical cardan ring, itself turnable about a vertical axis in bearings in a main frame. In gyroscopic compasses this frame is usually pendulously mounted e. g. in gimbals, but in directional gyroscopes that are not meridian-seeking, previous practice has been to have the frame fixed to the craft.

We have found that considerable advantages are obtained by mounting the main frame of a directional gyro as a universal pendulum, e. g. by suspending it in gimbals. In land vehicles this is very necessary, as the vehicle may proceed for long stretches of time inclined either forward or laterally; the former occurring when the vehicle is climbing a hill, and the latter when it is on a cambered road or on the side of a hill.

When the vehicle is inclined, the normally vertical axis of the vertical ring is no longer truly vertical, and therefore part of the weight of the gyro and vertical ring is taken sideways by the radial bearings for the vertical axis, which otherwise act merely as guides. The frictional torques round the "vertical" axis, coming into existence during turning of the vehicle, therefore increase enormously in value, and, as this axis is not vertical, these torques have components about a horizontal axis, thus causing the axis of the gyro to precess from its original direction.

In addition to this effect, which in itself may be quite serious, inclination of the craft has other effects. One is that, if the vehicle is tilted through a large angle, in either or both the longitudinal and transverse planes, the gimbal axes may be very far from being perpendicular to the gyro axis, and the gyro is then at a large mechanical disadvantage in attempting to overcome frictional torques about the gimbal axes. The other effect comes into evidence in gyroscopic apparatus fitted with erection devices for keeping the axes perpendicular to each other. If the vehicle is tilted for some time, these devices cause the gyro axis gradually to tilt into line with the vehicle, whereupon, if the vehicle straightens out again, the gyro is left inclined for a time, so that it not only has a much reduced directional moment, but also is at a mechanical disadvantage in overcoming friction.

By hanging the main frame pendulously in gimbals from an outer supporting frame, we avoid all these troubles, but we find that the pendulous frame is apt to be swung about violently, thus causing the instrument to be damaged. We therefore provide means for damping any oscillation or swinging of the pendulous frame. For this purpose we use damping means, such as dash-pots, free from all centralising tendencies.

In order to prevent damage due to vertical shocks, the outer supporting frame is itself resiliently mounted in the binnacle. Preferably we mount the frame on a number of rubber mountings arranged in a plane, and provided with rubber damping cups.

The above measures by themselves will not achieve the necessary reliability for a gyro for use in tanks. It is desirable to use a larger gyro than is normally used for aircraft; also, to suit the power supplies available, it is convenient to spin the gyro electrically using direct current.

In order to lead the current from the main frame to the vertical ring, which members must be capable of relative rotation through any number of revolutions, we provide mercury cup connections at the top and bottom. A stub shaft extends out of the bottom of the vertical ring and passes through a radial ball bearing, for which it acts as the inner race, to rest on a single steel ball acting as a thrust bearing. This ball is completely submerged in a mercury cup, the mercury acting as the electrical connection from the cup to the shaft which is insulated from the vertical ring itself. This forms one electrical connec-

tion from the frame to the vertical ring. A similar arrangement is provided at the top of the vertical ring. A member insulated from the ring extends upwards through a radial bearing and at the top carries the compass card with a mercury cup at the centre. A cover over part of the compass card is fixed to the main frame and carries an insulated contact pin which extends downwards into the mercury cup. Another single ball, acting as a thrust bearing, lies at the bottom of the mercury cup, and the contact pin just clears this. This thrust bearing therefore is normally not in operation, but acts as a limit stop in case the whole sensitive element should be thrown upwards off its bottom thrust bearing by violent movements of the vehicle.

Even when all these steps were taken difficulties were found in obtaining a gyro whose axis would remain approximately constant for long periods. After a day or two the performance would deteriorate, and irregular wandering would develop. This trouble has been traced to an effect of even the very minute vibration of the rotor that persists after the rotor has been carefully balanced. This vibration causes the vertical ring and the whole frame to vibrate in unison with the rotor; the forces to make them do so having necessarily to be transmitted by the bearings supporting the rotor case in the cardan ring, and the cardan ring in the frame. The continuous high speed hammering of the ball races of these bearings by the balls rapidly creates minute indentations. Thereafter the bearings become sticky and jerky in their action, and frictional effects at these bearings disturb the gyro.

We have found that this state of affairs may be remedied quite simply. We mount at least one pair of bearings resiliently in its supporting frame. Preferably we provide such resilient supports only for the bearings for the axis of support of the rotor case. In the case of a directional gyro, we use the following embodiment of our invention:

The rotor case carries the two pivots for the tilt axis diametrically opposite each other in a line at right angles to the rotor axis. These pivots engage in two ball races which, however, are housed not directly in the vertical ring, but in blocks each in the form of a truncated cone surmounted by a cylinder, the axes of the blocks coinciding with the tilt axis of the rotor case. The conical surfaces of the blocks are covered with a thin layer or wrapping of resilient material, such as cork or oil-proof rubber, which forms a flanged conical sheath, and the whole conical plug so formed is located in a conical hole in the inside of the vertical ring. The cylindrical part of the block is screw-threaded, and protrudes through the vertical ring to the outside where a nut and washer are fitted on. By screwing up the nut the conical plug is pulled tightly into the conical hole. The sheath of resilient material separates the block from the vertical ring, and the nut and washer are separated from the ring by the flange on the resilient sheath, so that the whole assembly of rotor case and bearing blocks is resiliently mounted in the vertical ring without there being any metal to metal contact between the supporting and supported members. It is found that this structure will allow vibrations of the rotor to vibrate the bearing housing blocks without the vertical ring and frame being affected. The forces transmitted by the bearings are therefore very greatly reduced.

Although the resilient mounting satisfactorily filters out vibrations, it does not permit sufficient freedom to allow the rotor case to become displaced, either along the direction of tilt axis or along that of the rotor axis, so as to cause unbalances great enough to affect the performance of the gyro.

We find it necessary, however, to prevent the rotor becoming displaced along the rotor axis owing to end play in the rotor shaft bearings, which end play is apt to vary with temperature. Such displacements may change from one end to the other irregularly and cause irregular operation. We therefore spring load one of the bearings to urge this bearing towards the other, by this means keeping the rotor pressed in one direction.

In the accompanying drawings, which illustrate one embodiment of the invention,

Figure 1 is a sectional elevation of a directional or azimuth gyroscope as viewed in the direction of the rotor axis.

Figures 2 and 2A are a sectional elevation, in two halves, of our complete instrument.

Figures 3 and 3A are a corresponding plan view, in two halves, of the complete instrument showing particularly the mounting of the frame in which the gyroscope itself is mounted.

Figure 4 is an axial sectional elevation of the gyro-rotor and its driving motor and their bearings.

In Fig. 1 there is shown a directional or azimuth, gyroscope comprising three principal members 1, 2, 3. The member 1 is the rotor case, within which the rotor spins about the normally horizontal axis AA'. The rotor case 1 is itself supported in the vertical ring 2 for oscillation about a normally horizontal axis BB' perpendicular to AA'. The vertical ring 2 is supported for turning in the main frame 3 about a normally vertical axis CC' perpendicular to BB'. Details of the bearings for the various axes are given hereinafter.

The gyro rotor has three degrees of rotational freedom (about each of the axes AA' BB' CC') with respect to the main frame 3,—which is all that is required for a free, or so-called directional gyro, so that further degrees of freedom are merely redundant. It has therefore been the practice heretofore to fix the main frame 3 of a directional gyroscope of the kind specified to the vehicle on which the instrument is mounted. In accordance with the principles of the present invention we do not do this, but suspend the outer frame 3 with freedom to tilt relatively to the vehicle.

As shown in Figs. 2 and 3, the main frame 3 is formed as a casing of roughly cylindrical shape, which completely encloses the vertical ring and rotor case. It is mounted with freedom to tilt relatively to the gimbal ring 4 about the normally horizontal axis DD', while the gimbal ring 4 is itself mounted to tilt relatively to an outer or support ring 5 about the normally horizontal axis EE'. The outer or support ring is resiliently mounted in an outer casing, or binnacle, 6, which is securely fixed to the vehicle by bolts screwed into tapped holes 7 in the base. Thus the main frame 3 has two degrees of rotational freedom relative to the vehicle and in addition, it has three degrees of translational freedom conferred on it by the resilient mounting of the ring 5, details of which are given hereinafter.

The main frame 3 is made pendulous with respect to its axes of support DD' and EE', so that the axis CC' normally hangs vertical. The vehicle may then tilt in any direction, and remain so tilted for long periods, e. g. when it is climbing a hill or proceeding along the side of a hill or on a cambered road, but the axis CC' will not be disturbed thereby, and so will remain truly vertical and therefore perpendicular to the axes AA' and BB'.

When the vehicle is subjected to jolts or is accelerated, the main frame 3 is set swinging about the axes DD' and EE' by reason of its pendulousness. We provide means for preventing such oscillations building up to large amplitudes. These consist of a dashpot device 9, connected between the main frame 3 and the gimbal ring 4, which damps oscillations about the axis DD', and a similar device 8, connected between the rings 4 and 5 for damping oscillations about the axis EE'.

The dashpot 9 consists of a hollow cylinder pivoted at its lower end 11 to a bracket 12 secured to the inner gimbal ring 4 by screws 12'. The cylinder is filled with oil and is closed by a screw cap 13 through which passes the piston rod 14. To the end of the rod 14 is secured the piston 15 whose diameter of the piston is slightly smaller than the internal diameter of the cylinder 10. Packing 16 secured between the cap 13 and a washer 17 is provided round the rod 14 and cap 13.

The upper end of rod 14 is pivoted at 18 to the lever 19 which is itself free to oscillate about the pivot pin 20 fixed in the inner gimbal ring 4. In the other end of the lever 19 there is fixed a pin 21 acting as a pivot joint for linking the lever 19 to a link 22 pivoted on a pin 23 fixed in the main frame 3. The levers 19 and 22 are of such lengths as to form a parallelogram linkage i. e. the axis DD' and the axes of pins 20, 21 and 23 are situated at the vertices of a parallelogram.

If the main frame 3 tilts relatively to the inner gimbal ring 4, the lever 19 tilts about the pin 20 through the same angle, and causes the piston rod 14 to move in the cylinder 10, both the piston rod and the cylinder 10 oscillating on their pivots 18 and 11 during the process, so as to keep alignment with each other. Oil is able to escape only slowly past the piston in the cylinder, so that a coupling exists between the frame 3 and the ring 4, which opposes relative movements by viscous forces that rapidly damp out oscillations. It is to be remarked that viscous forces only are employed so that the vehicle can remain inclined for long periods without disturbing the average position of the main frame 3. In particular no elastic or other centralising constraints are employed.

The dashpot device 8 is similar in construction to device 9.

The resilient mountings for supporting the outer gimbal ring 5 in the binnacle 6 can also be seen in Figs. 2 and 3. The ring 5 is provided with flanges 24 opposite the four corners of the binnacle. Below each of these flanges is a platform 25 formed by the horizontal part of a bracket 26 which is bent to provide a vertical arm 27. The platform 25 is rigidly secured to lugs 28, 29 which are solid with the binnacle. The resilient mountings of the instrument are provided between the flanges 24 and the platforms 25 for yieldingly taking the weight of the instrument, and these are supplemented by others connected between the upright bracket arms 27 and corresponding flanges 30 on the outer ring 5 for yieldingly centralising the instrument in the binnacle.

One of these shock absorbers 31 is shown fixed to flange 30. It comprises a rubber bush fixed in a plate 32, which is secured to the flange 30: in the centre is fixed a ferrule through which passes the screwed rod 33. A similar rubber bush is shown at 34: this is secured to the arm 27 in the same manner as 31 is secured to flange 30. The two bushes 31 and 34—and therefore plate 30 and arm 27—are kept apart by the shouldered portion 35 at one end of rod 33 and a nut on the other end, and are kept from separating by washers 36 and nuts 37 screwed on each end of rod 33.

The mountings that take the weight of the instrument are of the same general type but are of more robust construction. One is shown in Fig. 2 carrying the same reference numerals (but primed) as are used for the above described centralising mounting. This mounting, however, embodies an additional feature—the discs 38 mounted on the rod 33' on each side of the sleeve 35'. These act as stops to prevent too large a movement of the instrument upwards or downwards relative to the binnacle during abnormally unsteady motion or bumps of the craft, since without such limit stops excessive strains might be obtained causing damage to the rubber mountings.

The rubber mountings give limited freedom of movement to the instrument in all directions and therefore yield to shocks in any direction and prevent damage to the instrument.

The gyroscope is of the electrically driven D. C. type, the current being obtained from a battery carried on the vehicle. Connections are taken by flexible cables from the binnacle to the main frame 3 and thence to the rotor case by means that we shall now describe.

As shown in Fig. 1, the lower part of the main frame 3 is provided at the centre with an upwardly extending cylindrical boss 39 through which a hole passes from top to bottom. This hole is narrowed in the middle so that it is divided into an upper chamber 40 and a lower chamber 41 intercommunicating by a narrow neck. A cover plate 42, constituting the bottom of the chamber 41, is screwed to the under side of the boss 39 so as to form a liquid-tight seal with it, and the chamber 40 is filled with mercury to a height reaching above the narrowest part of the neck and nearly to the bottom of the chamber 40. In this way the mercury is very little disturbed even if the whole instrument is thrown violently about.

The chamber 41 is finished internally to have a smooth accurately cylindrical bore which permits axial sliding movement of a closely fitting cylindrical plug 43. The plug is provided with a number of holes through it from top to bottom permitting the passage of liquid from above to below as the plug moves up and down in the chamber 41. The upper surface of the plug is provided with a cup-shaped hollow at the bottom of which is placed a hardened and polished steel disc 44. In the hollow and resting on the disc 44, there lies a single steel ball 45 of diameter slightly smaller than the cup: this ball acts as the thrust bearing supporting the vertical ring 2 in the frame 3.

The vertical ring is supported on the ball 45 by means of the long pivot stud 46, which is located in the lower part of the ring 2 and is se-

cured there by the nut 47. A similar stud 48 and nut 49 is provided at the upper part of the ring 2. The two studs form the inner races for the radial or guide ball bearings 50, 51: they are accurately co-axial and together form the pivots for the ring 2.

The outer race of the bearing 50 is located in a plug 52, which is itself located in the upper part of the chamber, being secured therein by a cover plate 53 and spring ring 54. The plug 52 also acts as a roof for the chamber 40: it is extended downwards with only a very small clearance round the stud 46 so that mercury is prevented from being thrown up into the bearing 50.

The weight of the vertical ring 2 is applied to the cylindrical plug 43 through the thrust bearing 45 and plate 44. In order to reduce still further the effects of shocks on the vertical ring 2, the plug 43 is resiliently supported from the plate 42 by means of the spring 55: this normally holds the plug 43 pressed upwards to the limit of its range of movement, but, if the main frame 3 receives a violent upwards acceleration it will give slightly, thus softening the blow delivered to the vertical ring through the thrust bearing 45. A stud 56, which is solid with the bottom plate 42, locates the spring 55, and also acts as a limit stop for movement of the plug 43 in the chamber 41.

A vent hole 41' is provided connecting chambers 40 and 41: this is found to prevent high pressures being produced in the mercury in chamber 41 under special conditions which otherwise gives rise to splashing and leakage.

One of the legs of the D. C. electrical supply to the rotor of the gyroscope is connected to the main frame 3 and therefore via the mercury in chamber 41 and via stud 46 to the vertical ring 2. The other leg is in electrical circuit to the stud 48 by virtue of features that we shall now describe.

The stud 48 is not located in the vertical ring 2 itself, but in a bush 57 insulated from the vertical ring. As shown in Fig. 1, the bush 57 is conical and is located in a conical hole in the vertical ring 2, but is insulated from it by a sheath 58 of fibre or other insulating material. The bush 57 is tightly clamped into the conical hole in ring 2 by a clamping plate 59 which is also provided with a conical hole the surface of which conforms to a second conical surface on the upper side of the bush 57.

The fibre sheath 58 is extended between the bush 57 and the clamping plate 59 to insulate these from each other.

The plate 59 is screwed to the ring 2 by screws 60 by means of which pressure may be applied by plate 59 to the bush 57 to locate this rigidly in the vertical ring 2.

This part of the structure is assembled, impregnated, and baked, to form a rigid structure before machining takes place.

Just as the pivot stud 48 is insulated from the vertical ring 2, so is the bossed plate 61, forming the bearing housing for the upper guide bearing 51, insulated from the main frame 3. As shown in Fig. 1, the upper part of the main frame is formed as a circular platform 62 with a central hole. An insulating bush 63 is interposed between this and the bossed plate 61. Thus the upper pivot 48 and bearing 51 are completely insulated from the frames 2 and 3, and can be used to form an electrical connection to connect the second leg of the D. C. supply to a conductor 64 on the vertical ring 2.

For this second electrical connection at the upper guide bearing a mercury pool is also employed. As shown in Fig. 1 there is fixed to the upper end of the pivot 48 a cup 65 having a central boss drilled to form an internal cup 66, in the bottom of which is placed a hardened steel ball 67: this part of the inner cup is of diameter only very slightly larger than the ball.

Protruding downwards into the inner cup 66 is a pin 68, which reaches nearly to the ball 67. This pin is shouldered, its upper part 68' being of larger diameter; it is fixed to a rigid dome-shaped cover 69 screwed to the bossed plate 61. The cup 65 and the inner cup 66 are partly filled with mercury: the interiors of these cups are in communication with each other by means of passages 70, so that the cup 65 simply acts as a splash-over return for the mercury in the inner cup 66. A cover plate 71 having only a very small clearance round the shouldered part 68' of pin 68 is provided for the cup 65: this is screwed to a flange on the cup 65. Owing to the special formation of the shouldered pin 68 and of the cups 65 and 66 mercury that is dashed vertically upwards, if the instrument is thrown violently about, is diverted and its energy dissipated, so that it is not shot out of the small clearances at the bearings.

Current is led into the vertical ring from the bossed bearing plate 61 via the cover 69, pin 68, the mercury pool in cup 66, to pin 48 and thence by lead 64 to a terminal 69 on the vertical ring near the horizontal pivot axis BB' of the rotor case 1.

The rotor, shown in Fig. 4, comprises a flywheel 72 and the armature 73 (including the commutator 73') of an electric motor mounted on a shaft 73'' carried in bearings 74, 74' in the rotor case. The flywheel 72 is cup-shaped and the armature 73 is situated in the cup. There is sufficient room between the armature and the inside of the cup for the field poles 75 and field winding 76. These are mounted in the casting 77, in which is housed the bearing 74, and which forms half the rotor case. Bearing 74' is housed in casting 77' which forms the other half of the rotor case.

The motor is series wound, the circuit being from terminal 78 (Fig. 1) on the rotor case via lead 79 through one half of the field winding to brush-holder 80, through the armature 73 to brush-holder 81 and thence through the other half of the field winding to lead 82. To this lead there is joined a flexible lead consisting of a large number of very fine wires. This lead is secured to the side of the rotor case at a point opposite terminal 69 in the vertical ring to which it is connected by a freely hanging loop 83 which almost completely encircles the pivot axis. The insulation is removed from this part of the loop to make it more flexible and consequently, in order to remove any danger of a short circuit of this loop to the frame of the instrument, thin sheets of insulating material 84, 85 are provided on the inner face of the vertical ring 2 and on the side of the rotor case in the vicinity of the loop. An insulating bush 86 is also provided round the pivot shaft 87.

At the other end of the pivot axis a similar flexible loop connects terminal 78 with a corresponding terminal 88 screwed directly into the vertical ring. No insulation is required in the vicinity of this loop to insulate it from the rotor case and the vertical ring, since it is directly connected to both.

By the arrangements described for leading in current to drive the rotor, very low disturbing torques are provided at both the horizontal and vertical axes for the gyroscope, and, in fact, the greatest source of disturbance is found to be, not the electrical connections, but the ball bearings for both axes. These tend to become pitted with use, with the result that the pivots tend to rest in the pits, thereby introducing both frictional torques and torques acting to restore the rotor case to particular but variable positions. We have found that an important cause of such pitting is vibration of the rotor in its bearings in the rotor case, due, possibly, to slight residual unbalances that remain after the rotor has been balanced as well as possible, and also due to irregularities in the rotor bearings.

Accordingly, another important feature of our invention resides in the measures adopted to minimize damage to the bearings due to vibrations generated by the rotation of the rotor. For this purpose we resiliently mount the rotor case in the vertical ring.

The rotor case is pivotally mounted in the vertical ring by conical pivots. One of these 89 formed on the pivot shaft 87 is shown in Fig. 1: this forms the inner race of a ball bearing 90, the outer race 91 of which is housed in a conical plug 92, which is held, as is described below, into a corresponding socket 93 fixed in the vertical ring.

The plug 92 has a recess in the face that faces the rotor case; in it is located the outer race 91 of the ball bearing. In the outer face of the plug a hole is drilled which is provided with an internal thread to take the flanged nut 94. A layer of thin rubber 95 is inserted between the outer conical surface of the plug 92 and the socket 93, and the end of this is turned over the outer face of the socket 93 to lie between this and the flanges of the flanged nut 94. The nut is screwed up so as to draw the conical plug 92 moderately tightly into the conical hollow in socket 93, the flanged nut 94 exerting a corresponding thrust on the layer of rubber between the flanges of the nut and the socket 93. In this way the plug 92 can be located in the socket 93 with any desired amount of rigidity depending on the degree of pressure applied to the rubber layer 95. Sufficient pressure may be applied to locate the rotor case definitely in one mean position relative to the vertical ring so that it does not move therefrom during operation by an amount that causes any noticeable wandering of the gyro owing to the unbalance caused thereby, while sufficient resilience is nevertheless provided to leave the plug 92 free to execute with the rotor case the extremely minute high speed vibrations engendered by the rotation of the gyro rotor. As a result the balls of the ball bearing 90 are not subjected to the high speed hammering action that is the chief cause of pitting.

As a further consequence the high speed vibrations are filtered away from the vertical ring so that they are not applied to the bearings for the vertical axis.

When the flanged nut has been screwed up sufficiently to provide the optimum degree of compression to the rubber layer 95, a hole is drilled through it and through the socket 73, and a split pin is inserted to lock the nut to the socket so as to prevent relative rotation.

Socket 93 is screwed into a threaded hole in the vertical ring 2, nut 94 being slotted to admit a screwdriver for this purpose. In this way the bearings 90 at the two sides of the vertical ring 2 can be adjusted towards each other to take up play of the rotor case 1 along the axis BB' in its bearings 90. When the correct adjustment has been made, the sockets 93 are locked in the vertical ring 2. For this purpose the vertical sides of the ring are slotted by a cut in the central plane of the ring and clamping screws 97 are provided to draw the two parts of the ring together to grip the socket 93.

By the means just described we prevent movement of the centre of gravity of the rotor case and associated parts along the horizontal axis BB' during operation, with consequent disturbance of the balance of the gyroscope about the axis CG'. In order to prevent a shift of the centre of gravity along the axis AA' during operation, we provide means for preventing axial movement of the rotor relative to the rotor case. For this purpose the rotor 74' (Fig. 4) is provided with a spring thrust device for forcing the rotor in one direction.

The inner race 98 of bearing 74' is located on the rotor shaft 73'' against a shoulder while the outer race 99 is free to slide in an axial hole drilled in the casting 77', and is forced away from the nut 100, which is screwed into the threaded end of this hole, towards the bearing 74 by the spring 101, which abuts against the washer 102 in contact with the outer race 99. In this way the thrust of the spring is transmitted to the inner race 98 and serves to move the whole armature 73 to the left as shown in Fig. 4 until it is arrested by the outer race 104 of bearing 74 meeting the end plate 105, which is screwed to casting 77. The thrust of spring 101 is transmitted to the inner race 103 of bearing 74, from which it acts through bearing 74 to outer race 104 and end plate 105. Play in both the bearings 74 and 74' is therefore eliminated.

The bossed portion of casting 77' that forms the bearing housing for bearing 74' is also threaded externally and on it is screwed a nut 106. This nut is partly split by a cut 107, so that the part 106' is resiliently spaced from the main part; the nut can therefore be adjusted to any distance from the vertical axis CC' and is self-locking in every position.

On assembly, the nut 106 is screwed to a definite marked position and the gyroscope as a whole is then balanced about the axes AA', BB' and CC'. The nut 106 is then screwed in one direction or the other, in accordance with a scale of latitudes, to a position corresponding to the latitude of the place in which the instrument is being used. The weight then applies a constant torque about the horizontal axis BB', causing the gyroscope to precess round the vertical axis CC' at a rate equal to the vertical component of the earth's spin at the latitude in question.

In order to be able to set the gyro to any heading, a gear wheel 108 is fixed to the under side of the vertical ring. This is not normally in engagement with any other gear, but the crown gear 109 may be engaged with it by pushing inwards the knob 110. At the same time, locking mechanism is actuated to lock the rotor case 1 to the vertical ring 2, so that tilt about the axis BB' is prevented. Locking mechanism, or caging mechanism, is already known for this purpose, and is therefore not described here as the particular type employed is not an essential part of the present invention.

Owing to the fact that the rotor case 1 is caged it is possible forcibly to turn the vertical ring 2 together with the rotor case by the knob 110 when the crown gear 108 is engaged with the gear 103.

In order to read changes in course of the craft a card 111 engraved with compass markings is fixed to the upper part of the vertical ring and a window 112 is provided in the main frame 3 by which the card 111 can be read against a lubber line index 113. A corresponding window 114 is provided in the binnacle.

What we claim is:

1. In a directional gyroscope, a vertical ring mounted for rotation about a vertical axis, a rotor bearing casing having trunnions thereon for pivoting the same in said ring, and a multi-part ball bearing for pivotally supporting each trunnion in said vertical ring comprising a ball race, a retaining plug therefor having its outer surface tapered outwardly, a socket having a complementary tapered inner surface surrounding said plug, a rubber layer between said surfaces, and a flanged nut threaded in said plug and clamping said plug and socket together, with said rubber in between, the whole being threaded in said vertical ring.

2. A directional gyroscope as claimed in claim 1, in which said vertical ring has a threaded aperture receiving said socket, said ring being split adjacent thereto, and a clamp screw for locking said socket in the desired position.

WILLIAM GEORGE HARDING.
ROBERT HAYES NISBET.

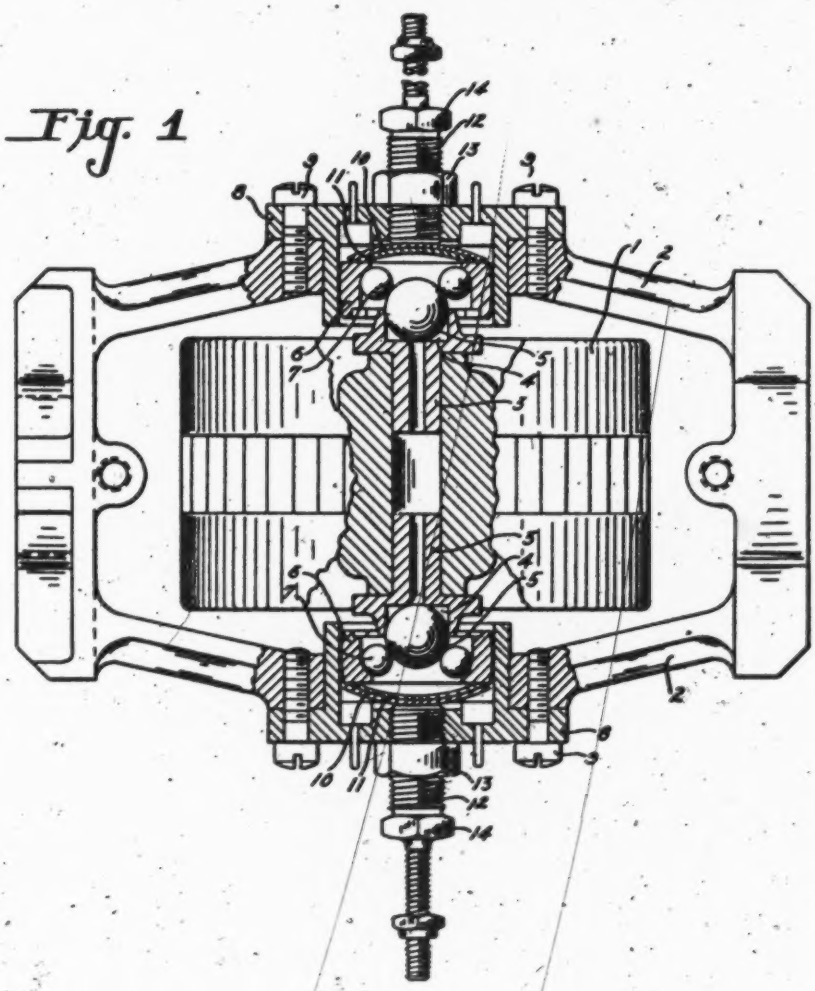
Exhibit A-38

June 27, 1944. B. G. CARLSON 2,352,469

SELF-ALIGNING AND TEMPERATURE COMPENSATING ROTOR BEARING ASSEMBLY

Filed Nov. 2, 1942 2 Sheets-Sheet 1

Fig. 1



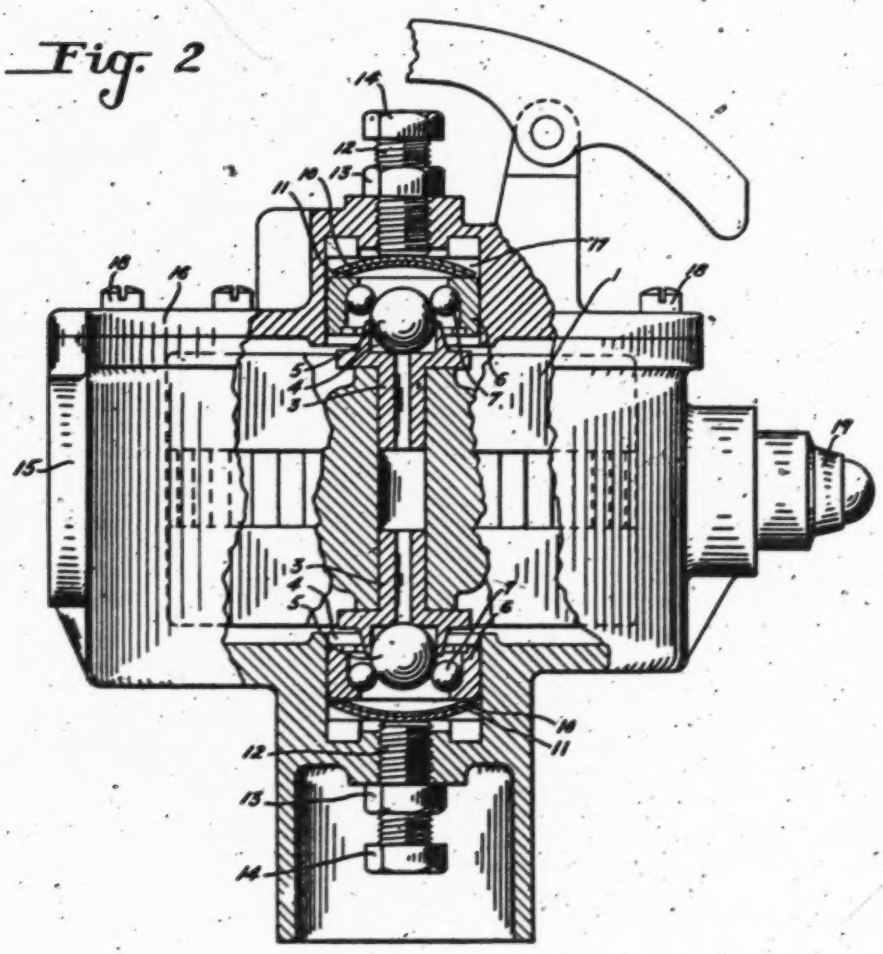
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SELF-ALIGNING AND TEMPERATURE COMPENSATING ROTOR BEARING ASSEMBLY

Filed Nov. 2, 1942 2 Sheets-Sheet 2

Fig. 2



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Patented June 27, 1944

2,352,469

UNITED STATES PATENT OFFICE

2,352,469

SELF-ALIGNING AND TEMPERATURE COMPENSATING ROTOR BEARING ASSEMBLY

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Application November 2, 1942, Serial No. 464,264

2 Claims. (Cl. 308—233)

This invention relates in general to rotors and more particularly to a new and novel method and means for mounting a gyroscope rotor within its bearings and for providing self-alignment and temperature compensation so as to maintain the correct freedom between the rotor and its bearings over a wide range of temperature variations.

In high precision instruments involving high speed rotors such as are found in gyroscopes, one of the greater problems has been to avoid binding or end play between the gyroscope rotor axle and its bearings because of the unequal coefficients of expansion of the parts of the assembly and the consequent failure to maintain constant bearing clearances between the rotor axle and its bearings. The conventional practice has been to bevel the two ends of the rotor pivot and to construct the rotor bearing to consist of a ball bearing race assembly which is resiliently urged into engagement with the conical bearing surface of the pivot.

It is therefore one of the primary objects of my invention to provide a new and novel means and method of insuring self-alignment and for predeterminedly compensating for temperature conditions and variations and in accomplishing this object I propose to provide the upper and lower extremities of the rotor pivot with a steel ball as the surface of the pivot to be engaged by its respective bearing assembly which may comprise ball bearings held in a race having a slightly spherical exterior so that the bearing assemblies are self-aligning with respect to the rotor pivot ball tips that they engage. I further propose to retain the bearing assemblies in such pivot engaging relationship by adjustment devices for clamping bimetallic members into clamped pressure abutment with the bearing races for purposes of temperature compensation so as to maintain constant bearing clearances and thus eliminate binding and end play between the rotor axle and its bearings and to also insure such freedom of operation of the rotor about its axis over a wide range of temperatures.

Accordingly, by my proposed method and means, and regardless of the coefficients of expansion of the rotor axle, bearing clearances between the rotor axle, or pivot, and its bearings are maintained constant and consequently binding or end play between the bearings and the rotor axle is eliminated. So far as the clearances between the rotor end pivot balls and their bearings, carried by their supporting gimbal or rotor housing, are concerned, any tendency of the assembly to contract or expand under low or high temperature conditions is compensated for by the bowed bimetallic clip with its outer portion of copper and its inner portion of steel interposed between the bearing race and the bearing support and clamping adjustment device.

With the foregoing and other objects in view, my invention resides in the new and novel method and means and in the combination of parts and details of construction set forth in the following specification and appended claims, certain embodiments thereof being illustrated in the accompanying drawings, in which:

Figure 1 is a top plan view partly in section through a horizontal axis directional gyroscope rotor assembly and its supporting gimbal frame and also showing the rotor axle and bearing assemblies; and

Figure 2 is a similar view of a vertical axis horizon gyroscope rotor assembly.

Referring more particularly to the drawings, it should be understood that so far as the present invention is concerned and so far as it is applicable to horizon and directional gyroscopic rotor assemblies as will be described as two embodiments of my invention, only those parts of the rotor, its bearings, gimbals and housing that have any definite relation to my invention necessitate any detailed description.

With this in mind and in connection with the directional gyro, as shown in plan view in Figure 1, the gyro rotor 1 rotates about a horizontal axis in bearing assemblies carried by a supporting gimbal frame 2. As is conventional practice, the gimbal frame is pivotally supported in the usual manner in the vehicle adapted to carry it so as to permit oscillation about a horizontal axis at right angles to that of the rotor.

Each of the two rotor pivots comprises a barrel 3 with a cup-shaped extremity 4 into which is preferably press fitted a steel ball 5 so as to rotate with the rotor. The bearing assemblies each include a race 6 and balls 7 carried by a housing 8 that is releasably secured by screws 9 to the gimbal frame 2 that supports it. Resting on the outer surface of each ball race is an outwardly bowed bimetallic clip, or disc, the outer layer 10 of which is preferably copper and the inner layer 11 steel. An adjustment screw bolt 12, nut 13 and lock nut 14 are provided so that the bolt 12 when turned in the bearing housing 8 forms the means for clamping the

ball bearings 7 against the pivot ball 5 in predetermined proper pressure engagement through the slightly resilient medium of the bimetallic element 10, 11.

The advantageous self-aligning feature of the invention is brought about by the fact that the ball bearings 7, instead of bearing against the conventional conical pivot tip, are in constant engagement with a ball 5, which assembly more readily assures self-alignment. A further means of insuring self-alignment, without the attending creeping of the ball bearings, is provided by the forming of the outer surfaces of the ball races slightly convex, or spherical, as shown in the drawings. This permits slight rotation of the race as the ball bearings ride on the pivot ball to compensate for slight misalignment that might otherwise occur in the rapid rotation of the rotor.

The temperature compensation feature of the invention is provided for by the interposition of the bimetallic thermostatic element 10, 11 between the pivot ball and bearing assembly of steel and the bearing housing and gimbal of magnesium, inasmuch as the inner layer of lesser area is of steel and the outer layer of greater area is of copper.

In Figure 2 there is shown in elevation, partly in vertical section, the invention as applied to a vertical axis horizon gyro rotor assembly, wherein the rotor 1 is provided with the usual casing 15 in which the rotor rotates. In this case the casing constitutes the support for the rotor in that the casing supports the bearing assemblies 6, 7 for the rotor pivot and which rotor pivots 3, 4, 5 and bearing assemblies 6, 7 are the same as those described in connection with the directional gyro shown in Figure 1. In assembling the horizon gyro rotor of Figure 2, the same is inserted in the rotor casing 15 with the pivot ball tip 5 in engagement with the ball bearings 7 and the bimetallic copper and steel element 10, 11 in engagement with the ball race 6 and adjustment screw bolt 12. The casing is provided with a top plate 16 including a bearing housing 17 to receive the upper bearing assembly, bimetallic element and adjustment screw bolt. This top plate, with this assembly, is then releasably secured by screws 18 to the casing and the entire assembly adjusted, with respect to bearing clearances. The casing is provided with the usual trunnions 19 for rotation about a transverse horizontal axis in the usual gimbal frame, not shown. By this arrangement and adjustment the same degree of insurance of self-alignment of bearings and temperature compensation for constant bearing clearances over a predetermined wide range of temperature conditions is obtained as discussed in connection with the directional gyro assembly of Figure 1.

From the foregoing it will be seen that there has been provided a ball pivot and bearing assembly that will automatically compensate for temperature variations over a wide range due to the bimetallic thermostatic self-alignment of the ball bearings and bearing race with respect to the pivot so as to maintain constant bearing clearances.

I claim:

1. In combination in a gyro rotor assembly, a rotor provided with axial pivots about which it rotates having press fitted steel ball extremities, ball bearing assemblies in engagement with said pivot ball extremities and supports for said ball bearing assemblies to rotate therewith, resilient bimetallic thermostatic members stationarily mounted in said ball bearing assembly supports to bear against the races of said ball bearings for urging said ball bearings inwardly into engagement with said pivot ball extremities, exterior means bearing directly on said bimetallic members for adjusting the compression of said bimetallic members for forcing said ball bearings inwardly against said pivot ball extremities for predeterminedly adjusting and constantly maintaining constant the bearing clearances therebetween over a range of temperature changes.

2. In combination in a gyro rotor assembly, a rotor provided with axial pivots about which it rotates having press fitted steel ball extremities, ball bearing assemblies in engagement with said pivot ball extremities and supports for said ball bearing assemblies to rotate therewith, resilient bimetallic thermostatic members stationarily mounted in said ball bearing assembly supports to bear against the races of said ball bearings for urging said ball bearings inwardly into engagement with said pivot ball extremities, exterior means bearing directly on said bimetallic members for adjusting the compression of said bimetallic members for forcing said ball bearings inwardly against said pivot ball extremities for predeterminedly adjusting and constantly maintaining constant the bearing clearances therebetween over a range of temperature changes, the outer surfaces of said ball bearing races being slightly spherical to permit slight rotation thereof in their supports for automatic self-alignment of the ball bearings with respect to the pivot ball extremities.

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Exhibit A 40

Nov. 21, 1950 J. L. MOODY 2,530,533

METHOD OF MAKING ELECTRIC MOTORS

Original Filed July 15, 1944 3 Sheets-Sheet 1

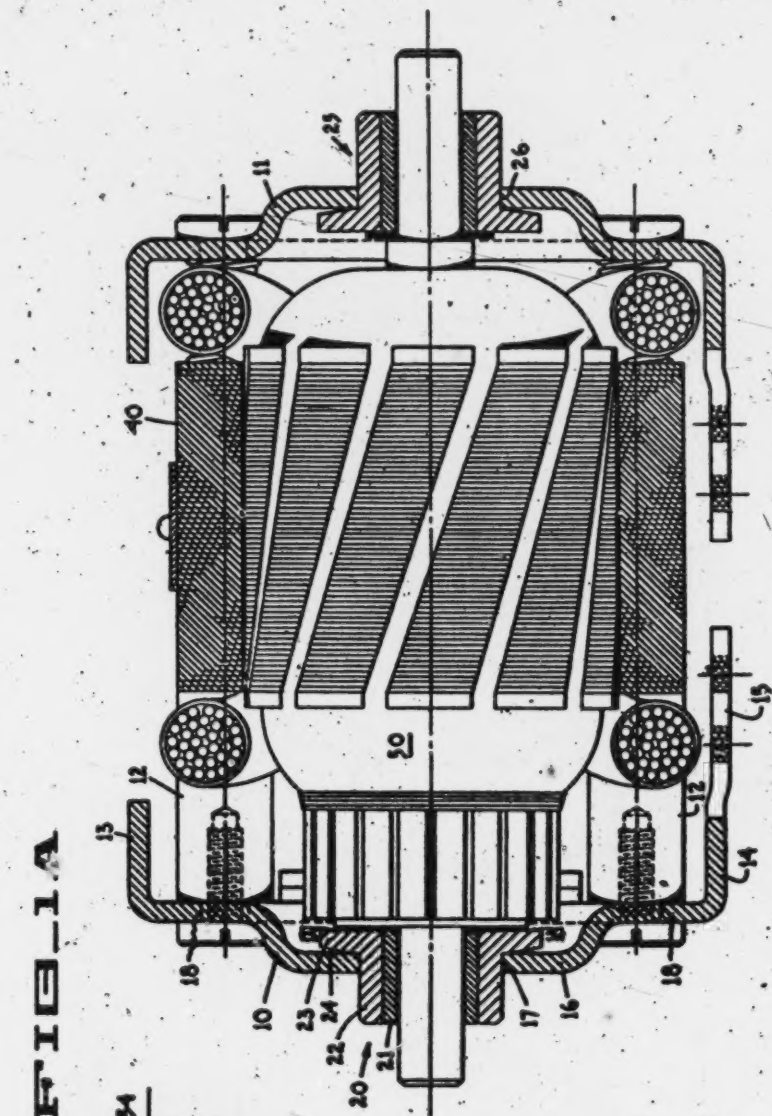


FIG-1

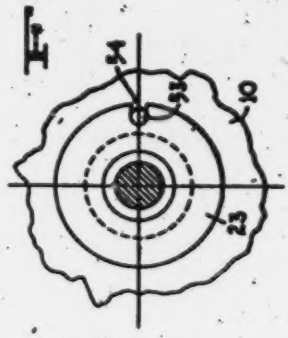


FIG-1A

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METHOD OF MAKING ELECTRIC MOTORS

Original Filed July 15, 1944 3 Sheets-Sheet 2

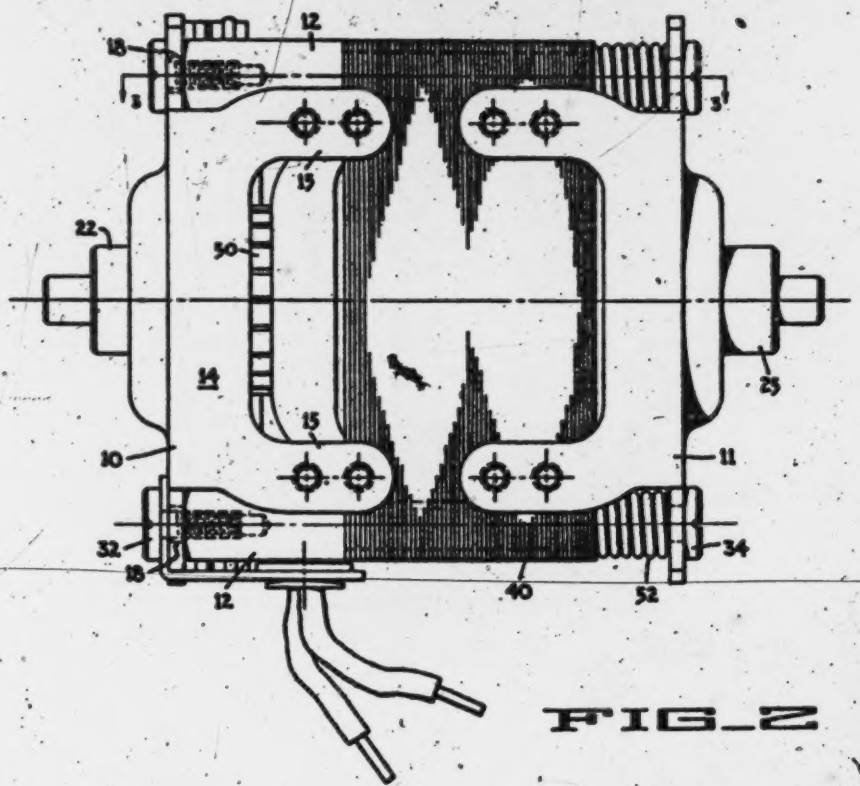


FIG_2

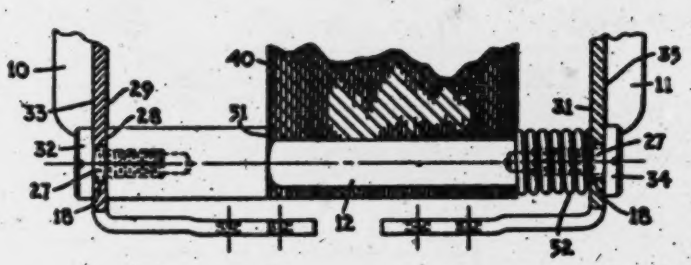


FIG_3

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Nov. 21, 1950 J. L. MOODY 2,530,533

METHOD OF MAKING ELECTRIC MOTORS

Original Filed July 15, 1944 3 Sheets-Sheet 3

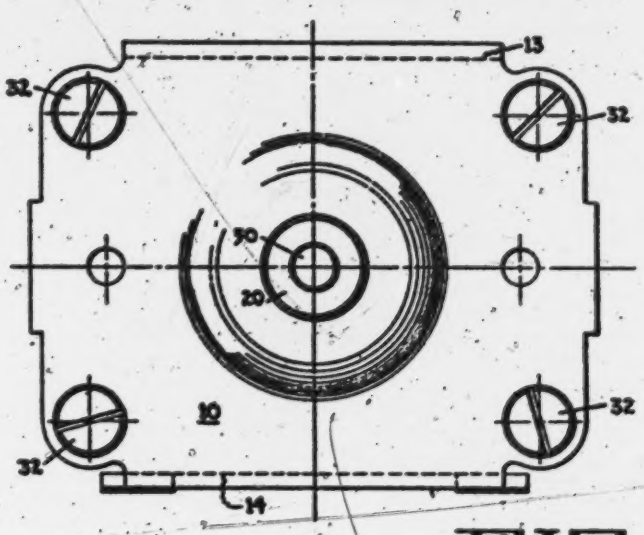


FIG_4

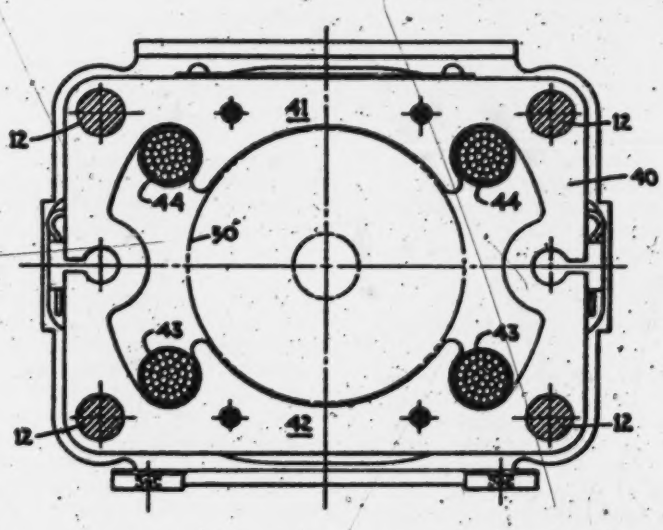


FIG_5



FIG_6

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Patented Nov. 21, 1950

2,530,533

UNITED STATES PATENT OFFICE

2,530,533

METHOD OF MAKING ELECTRIC MOTORS

John L. Moody, Oakland, Calif., assignor to Friden Calculating Machine Co. Inc., a corporation of California

Original application July 15, 1944, Serial No. 545,040. Divided and this application November 5, 1945, Serial No. 626,825

2 Claims. (Cl. 29—155.5)

1

The invention will be disclosed as embodied in the construction of a frame and bearing support means for a fractional horsepower motor, although it will be evident that features of the invention have wider application. This application is a division of my co-pending application Serial No. 545,040, filed July 15, 1944.

One of the principal problems in the manufacture of a motor is to construct the parts of the supporting framework so that when the parts are assembled the bearings for the armature shaft will be in alignment, and so that the armature when supported in those bearings will be disposed coaxially within the aperture of the field lamination assembly. With heretofore-employed motor-frame designs and methods of manufacture, the air gap between the armature and the field had to be made undesirably large from a motor performance standpoint in order to allow for the variations in the air gap of different motors produced—these variations being inherent in the design and method of manufacture.

The object of my invention is to provide a construction and method of manufacture which overcomes these difficulties and enables the air gap to be reduced in production motors, thereby increasing their efficiency and torque.

The usual practice is to construct the motor framework of castings. Castings are in themselves expensive and, furthermore, require extensive and accurate machining operations such as boring the bearing holes, counterboring surfaces for locating the field lamination assembly in position, and machining the castings to enable them to be accurately fitted together. In spite of the elaborate efforts which are made to construct these cast frames accurately, nevertheless, when they are assembled the bearings for the armature have to be line-reamed because the frame parts cannot be manufactured with sufficient accuracy to have the bearings in alignment when the parts are assembled.

In the drawings:

Fig. 1 is a vertical, longitudinal section through a motor.

Fig. 1A is a detail view of a bearing.

Fig. 2 is a bottom view of the motor.

Fig. 3 is a fragmentary section taken on the line 3—3 of Fig. 2.

Fig. 4 is an end view of the motor.

Fig. 5 is a vertical transverse section thereof.

Fig. 6 is a detail view of one of the dowel rods.

The frame comprises two end shields 10, 11 (Fig. 1) which are rigidly connected together in spaced apart relationship by means of four identical dowel rods 12, preferably turned in a screw machine (Figs. 1, 2 and 4).

2

Since the end shields are identical, only one need be described in detail. The end shield 10 is a single piece formed from sheet metal. As shown in the end view (Fig. 4), the body of the shield is substantially rectangular in shape with a horizontally extending flange 13 at the upper edge and a horizontally extending flange 14 at the lower edge. As shown in Fig. 2 the lower flange 14 has two projecting feet 15 which, as shown in Fig. 1, are preferably disposed in a lower plane than the flange 14. The central portion 16 of the body is disposed in a plane parallel to and spaced apart from the plane of the body proper. In the center of the portion 16 is a bearing hole 17. Four dowel rod holes 18 are provided in the four corners of the shield, and two holes are provided in each foot 15. These holes are all punched simultaneously by a special machine tool so that the center to center distance of the hole is accurately determined and is the same in all plates punched with the tool.

The bearing 20 consists of a sleeve or bearing proper 21 which is pressed in a bearing housing 22. The bearing housing has a single flange 23, the face 24 of which is relieved as shown in Fig. 1. The bearing 20 is assembled in the plate 10 by pressing and force-fitting its housing 22 into the hole 17.

As previously explained, the end shield 11 is identical with the end shield 10 and, to insure exact duplication, the two shields preferably have their holes punched by the same tool and are formed in the same die. The bearing 25 is identical to the bearing 20 and is assembled in the end shield 11 in the same manner.

The dowel rods 12 which secure the end shields together to provide a substantially rigid frame structure also serve to locate the bearing hole 17 in the end shield 10 in alignment with the bearing hole 26 in the end shield 11. One of the dowel rods 12 is shown in detail in Figs. 3 and 6, where it will be noted that it has reduced ends 27 which are adapted to fit into the holes 18 in the end shields. This dowel construction insures alignment of the bearing holes. In order to locate the end shields parallel, each of the dowel rods 12 has a shoulder 28 which is brought into engagement with the face 29 of the end shield 10, and has a shoulder 30 which is brought into engagement with the face 31 of the end shield 11. A screw 32 threaded into the rod 12 bears against the face 33 of the end shield 10, and a screw 34

threaded into the other end of the rod 12 bears against the face 35 of the end shield 11.

The stator is a field lamination assembly 40 which comprises a plurality of plates riveted together, the form of the plate being shown in Fig. 5 where it will be seen that poles 41, 42 are provided, together with suitable apertures for coils 43, 44. The dowel rods 12 pass through holes in the field lamination assembly 40 and serve to support the field assembly, so that the poles 41, 42 are concentric with the bearing holes and the rotor or armature 50. In order to support the field lamination assembly in the correct position axially of the motor, each of the dowel rods 12 has a shoulder 51 (Figs. 3 and 6) against which the assembly 40 fits. In order to allow for variations in the overall thickness of the field lamination assembly at the four corners, I provide on each of the dowel rods 12 a spring 52 which bears at one end against the face 31 of the end shield 11 and at the other end against the field lamination assembly 40. The springs 52 hold the assembly 40 against the shoulders 51 on the dowel rods 12.

After the motor has been assembled as shown, I have found that if the armature 50 does not turn easily in its bearings that the bearings can be tilted and aligned to free the armature for rotation by applying a sudden, i. e. shock, force to the armature transversely of its axis. This can readily be done by holding the motor in the hand and hitting the field lamination assembly a blow with a soft striker, such as a hammer.

I will now point out the advantages in my construction. Heretofore in constructing motors, it has been necessary to assemble the motor without the armature and the line ream the bearings. The only way in which the armature bearings could be accurately aligned was by actually machining the bearings after they were in place. In other words each motor had to have its bearings individually reamed to fit. This was due to the fact that it was practically impossible to construct the frame so that the bearings would be accurately enough aligned to permit proper rotation of the armature. It will be evident that with my construction a great saving of time and expense results. No line reaming is necessary. The motor is completely assembled and, as pointed out, if the armature does not turn freely due to misalignment of the bearings, merely striking the motor a blow will automatically cause the bearings to come into alignment.

There are certain factors which I believe contribute to this result and these I shall now point out.

The drawings are an accurate reproduction of a design which has been successfully employed in production where the thickness of the end shield is 0.078" and the diameter of the bearing hole 17 is 0.562". The end shield 10 and the bearing housing 22 are made of steel. The bearing is made of sufficient length to provide adequate bearing surface for the armature shaft. However, it will be noted that the length of the bearing exceeds the thickness of the plate in which it is supported. The thickness of the plate in contact with the bearing housing should not exceed half the length of the housing or the bearing cannot be subsequently adjusted in the above manner.

Another relationship which I think is important is the ratio between the thickness of the plate and the diameter of the hole. The thickness of the metal at the bearing hole should not exceed one-half the diameter of the hole.

In the design shown, bearing housing 22 has a press fit in the hole 17 of the end shield. This is a Class 6 fit as defined by the American Standards Association. This is a fit which is used where parts are to be more or less permanently assembled and light pressure is required in the assembly operation. In general, the diameter of the hole in the frame part should not exceed the diameter of the bearing, the lower limit being the case where the diameters are equal, the upper limit depending upon the strength properties of the metal used.

All of the above factors will vary somewhat with the kind of metal employed, depending especially on the modulus of elasticity and the elastic limit under compression.

I believe another important factor is that the bearing be restricted against axial movement in the frame piece in one direction only. There is only one flange on the bearing housing 22, namely the flange 23, and this flange is preferaby relieved as shown at 24 so that the point of contact between the flange and the face of the plate is located as close to the center line of the bearing as possible. I prefer to provide an extrusion 53 (Fig. 1A) in the end shield 10, which fits into a notch 54 in the flange 23. The purpose of this construction is to prevent rotation of the bearing housing 22 in the event that the armature shaft freezes in the bearing.

It is quite possible that in applying force to the armature transversely of its axis to bring the bearings into alignment that compression of the metal in the end shield 10 and/or in the bearing housing 22 occurs, and for this reason I do not recommend the use of extremely hard metals or heavy force fits.

While I have disclosed a bearing supporting means as embodied in a motor frame, it will be apparent that it may be used wherever it is necessary to provide a bearing for a shaft or the like in a part of a framework and particularly where it is necessary to provide more than one bearing for the shaft and to have these bearings in axial alignment.

The advantages of the frame construction which I have disclosed are that it permits making the end shields exact duplicates by punching the holes with the same tool and forming the shields in the same die. This, plus the use of dowel rods which fit into the holes, insures not only that the bearing holes will be assembled in alignment but that the field lamination assembly which is supported on these rods, will be located with its poles concentric with the axis of the armature. This latter is a distinct advantage in that it permits lower manufacturing tolerances in the air gap between the armature and the poles than was heretofore possible, and this reduction in the air gap results in obtaining increased torque from the motor.

I claim:

1. A method of manufacturing a substantially rigid frame for a motor or the like, and assembling the frame with other motor parts, which consists in punching a bearing hole and a plurality of dowel holes in two pieces of sheet metal, employing the same tool for punching both pieces, forming said pieces into identical end frames by the same die, pressing bearings into the bearing holes, turning a plurality of identical dowel rods in a screw machine with dowel ends to fit said dowel holes and shoulders adjacent said dowel

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CARD 10

E. A. SPERRY.

CONTROLLING MECHANISM FOR SHIPS' GYROSCOPES.

APPLICATION FILED JAN. 25, 1918.

1,342,397.

Patented June 1, 1920.

3 SHEETS—SHEET 2.

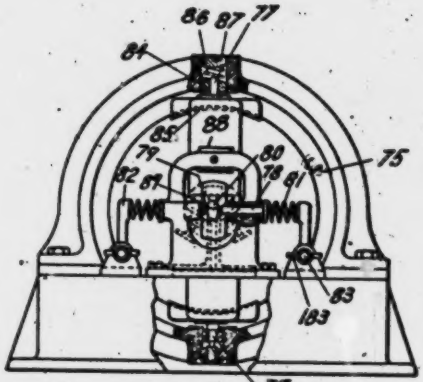


Fig. 7.

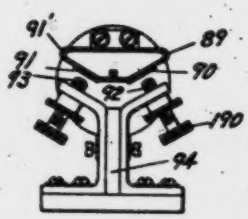


Fig. 8.

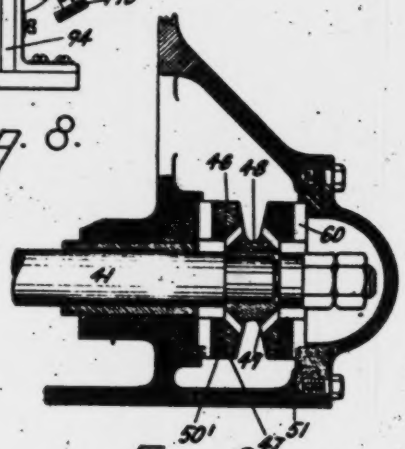


Fig. 9.

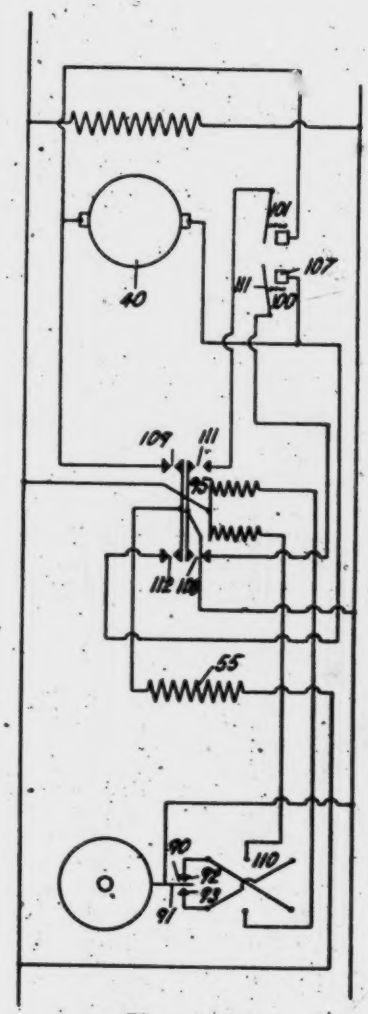


Fig. 10.

INVENTOR

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BY

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ATTORNEY

ends for engaging said end frames, assembling the parts with the armature supported in said bearings and the dowel ends of said rods in the dowel holes in said end frames to provide a substantially rigid frame structure, and applying force to said armature transversely of its axis to cause alignment of said bearings if they are out of alignment.

2. A method of manufacturing a substantially rigid frame for a motor or the like, and assembling the frame with other motor parts, which consists in punching a bearing hole and a plurality of dowel holes in two pieces of sheet metal, employing the same tool for punching both pieces, forming said pieces into identical end frames by the same die, pressing bearings into the bearing holes, turning a plurality of identical dowel rods in a screw machine with dowel ends to fit said dowel holes and shoulders adjacent said dowel ends for engaging said end frames, assembling the parts with the armature supported in said bearings and the dowel ends of said rods in the dowel holes in said end frames to provide a substantially rigid frame structure, and applying force to said armature transversely of its axis by hittting the assembly with a soft striker to correct any misalignment of said bearings.

JOHN L. MOODY.

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March 31, 1953 F. W. HERR 2,633,544

OSCILLATING ELECTRIC MOTOR

Filed Sept. 3, 1949

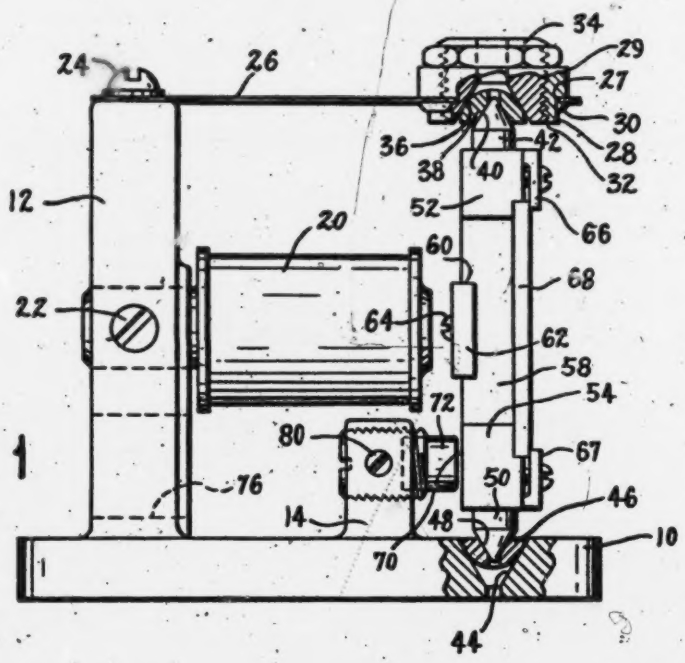


Fig. 1

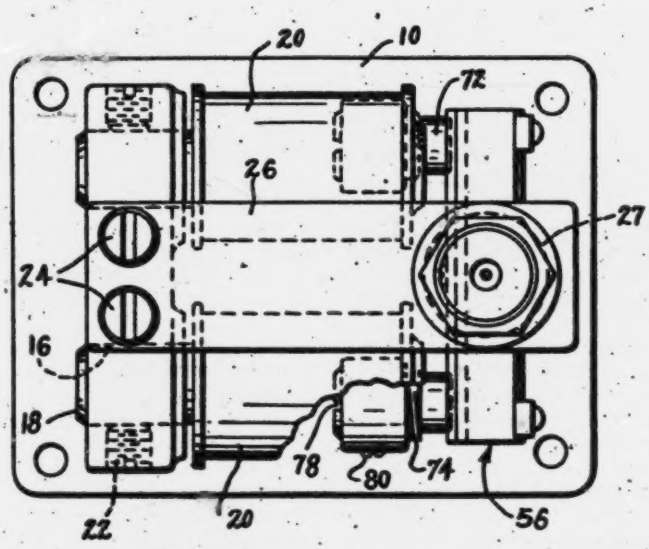


Fig. 2

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Patented Mar. 31, 1953 2,633,544

UNITED STATES PATENT OFFICE

2,633,544

OSCILLATING ELECTRIC MOTOR

Frederick W. Herr, South Bend, Ind., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts

Application September 3, 1949, Serial No. 114,008

4 Claims. (Cl. 310—36)

1

This invention relates to electric motors and more particularly to electric motors of the type having pivotally mounted oscillating armatures.

In certain mechanisms, it has been found desirable to employ electric motors of the type described and to have the oscillating armatures thereof arranged during the swinging or oscillating movements thereof to synchronously follow the frequency or impulses of an electric current as well as to follow as closely as possible the predetermined and sometimes variable wave shapes thereof. Thus, when the swinging motion is considered against time, wave shapes of desired curve characteristics may be produced thereby. Such a wave motion might even be modified by other mechanical means if desired for effecting modified wave shapes to certain parts of such a curve. For example, an electric motor having a pivotally mounted oscillating armature and arranged to provide a variable wave motion for a light beam reflecting mirror carried upon the armature for optical purposes has been disclosed in co-pending application Serial No. 774,393 filed September 16, 1947, in the name of R. C. Beitz. The motor armature of the motor in this disclosure is required to follow, during its operation, the frequency of the alternating current supplying energy to the motor while having its amplitude variable in magnitude or even varied differently when swinging to opposite sides of its central position. Also, resilient means are provided to work in conjunction with this swinging armature to additionally modify certain portion or portions of this swinging motion while the armature still maintains the desired synchronism and phase relationship.

A motor of the type described may be subjected to considerable use under high and varying speeds and under most exacting operating conditions and thus it is most desirable that the moving parts thereof should not only operate with as little frictional resistance or "drag" as possible, in order to give as sensitive and complete response as possible, but also should be as free as possible from wear so that this high degree of performance of the motor armature will continue substantially unchanged over a long period of time. Obviously any looseness of play at any time in such a motor would be most objectionable. Thus, in order to best satisfy the above and other conditions in such a motor, applicant has provided an arrangement and construction such that the parts may be readily assembled and easily adjusted so as to provide a minimum of frictional resistance during operation thereof

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and a minimum of wear in the parts, with the parts being so arranged that no looseness or play will be present or will subsequently occur therein even after the motor has had extended use.

A better understanding of the invention will be had from the detailed description which follows when considered in conjunction with the accompanying drawing in which:

Fig. 1 is a side view of a motor comprising the present invention, with parts thereof being broken away to better show details of construction; and

Fig. 2 is a plan view of the motor, also with parts broken away to better show details of construction.

An oscillating armature type motor embodying the present invention is shown in the drawing and comprises a main support or base 10 having a rigid upstanding supporting arm 12 near one end thereof and a pair of smaller rigid projections 14 thereon equally spaced at opposite sides of the central vertical plane extending longitudinally of the base. The purpose for the projections 14 will be described later. The supporting arm 12 is provided at opposite sides of this central plane with a pair of cylindrical openings 16 therethrough for receiving the cylindrically shaped ends 18 of a pair of electromagnets 20 and locking screws 22 extend into smaller openings in the opposite sides of the supporting arm 12 for engaging portions of the cylindrically shaped ends 18 and holding the magnets in desired positions of adjustment depending upon the use to which the motor is to be put.

At the upper end of the supporting arm 12 is securely clamped as by means of screws or the like 24 a flat flexible spring-like member 26 having a relatively large opening 27 in an outer free end portion thereof for the insertion of a tubular collar 28 which may have a ring-like flanged portion 29 thereof extending outwardly so as to rest upon the member 26 about said opening when the collar is positioned therein. When so positioned the collar may easily be soldered or otherwise fixedly secured to the spring-like member 26 as indicated at 30. The collar 28 has threads formed upon its inner surface as indicated at 32 for the reception of an adjustable threaded ring-like member 34 which has formed centrally in its lower portion a frustro-conically shaped bearing surface 36 against which bears an upper semi-spherically shaped oil or graphite impregnated porous bronze bearing 38. The bearing 38 is provided with a centrally located frustro-conically shaped and high-

ly polished surface 40 in the lower part thereof so as to receive the upper conically shaped and highly polished end of a hardened steel pivot pin 42. The bearing 38 will thus be positioned substantially vertically above a frustro-conically shaped opening or recess 44 formed in the base 10 and is similarly adapted to receive a semi-spherically shaped graphite or oil impregnated porous bronze bearing 46 which likewise has formed centrally therein a frustro-conically shaped and highly polished bearing surface 48 facing upwardly so as to receive the highly polished conically shaped lower end of a hardened steel pivot pin 50. By making surfaces 40 and 48 frustro-conical instead of merely conical there is less chance of any lateral movement of the pivot pins should any wear at this location subsequently occur.

The pivot pins 42 and 50 are carried by and extend vertically from the horizontally disposed legs 52 and 54 of an H-shaped frame 56 and are aligned with the cross-bar 58 thereof so as to centrally support the frame for oscillatory movement. The frame 56 supports in a recess 60 at its inner side a transversely extending soft iron bar 62 which serves as the oscillating armature for the motor. The bar 62 is preferably secured in place by means of a centrally disposed screw 64. Upon the recessed front surface of the pivoted frame 56 is secured, by releasable clamping means 66, 67 or the like, a first surface mirror 68.

The lower leg 54 of the H-shaped frame, it will be noted, extends laterally so as to provide abutment surfaces 70 for engagement by a pair of laterally spaced resilient bumpers 72 of sponge rubber or the like carried by threaded cylindrical thimbles 74 which have screw-threaded engagement with threads in openings in the laterally spaced projections 14. These thimbles 74 may thus be adjusted by small amounts toward or away from the abutment surfaces 70 by the use of a screw driver or the like inserted through openings 76, provided for this purpose in the support 12, and into engagement with slots 78. Thus it is possible to accurately space the bumpers from said surfaces 70. Thimbles 74 may then be locked in operative positions by means of small screws 80 threaded into the sides of the projection 14.

Since the threaded ring-like element 34 may be moved by small increments toward or away from the base 10 a very exact amount of frictional engagement may be provided between the upper and lower semi-spherical bearing members 38 and 46 and the pivot pins 42 and 50. In fact, the use of the spring-like member 26 for supporting the upper semi-spherical bearing enables these parts to be maintained in very slight touching engagement at all times so that no play will exist or later occur therebetween even though a slight amount of wear might subsequently occur at the conical surfaces 40 and 48. On the other hand, since the spring-like member 26 is relatively wide and extends in a direction at right angles to the axis about which the armature oscillated, the frame 56 and member 34 are prevented from tilting even slightly either laterally or longitudinally. Thus the ring-like member 34 may be moved downwardly toward the armature just sufficiently to produce a good working engagement between the conically and semi-spherically shaped surfaces. Furthermore, the semi-spherically shaped bearing members 38 and 46 are self-aligning and thus assume and maintain proper alignment of the conical surfaces 40 and 48 with the upper and lower pivot pins 42 and 50 so no binding effect will occur even though the center of the ring-like member 34 may not be positioned exactly over the center of the recess 44. While two pivot pins 42 and 50 have been described above, it will be obvious that a single pivot pin extending entirely through the center of the H-frame and provided with conically shaped ends could be as readily used.

Having described the invention, I claim:

1. An electric motor of the character described comprising a base, a pair of alternately energizable electro-magnets carried by said base, an armature normally disposed in an inactive position adjacent both of said electromagnets so as to be within the magnetic fields of said electromagnets during the energizing thereof, a pivot pin supporting said armature in said inactive position for oscillatory movement about a relatively fixed longitudinal axis centrally thereof and relative to said base, said pivot pin having conically shaped bearing surfaces upon the opposite ends thereof, a pair of self-aligning elements each having a conically shaped recess in engagement with one of said conically shaped ends, each of said self-aligning elements having a spherically curved exterior surface portion, a relatively thin, wide, elongated resilient arm normally fixedly carried by a part fixed relative to said base and having an elongated yieldable free end portion in spaced relation to said base, substantially axially aligned supporting means providing conically shaped recesses carried by the elongated free end portion of said arm and by said base, respectively, and engaging the spherically curved surface portions on said self-aligning elements, one of said supporting means comprising two screw-threaded sections secured together so as to allow one section thereof to be axially adjusted substantially along said fixed axis and relative to the other of said sections and into proper pressing engagement with the spherically curved surface on the adjacent one of said self-aligning elements, whereby said self-aligning elements are readily tiltable so as to allow uniform circumferential engagement between the conical surfaces on said pin and in said elements during relative oscillatory movement therebetween.

2. An electric motor of the character described comprising a base, a pair of alternately energizable electromagnets carried by said base, an armature normally disposed in an inactive position adjacent both of said electromagnets so as to be within the magnetic fields of said electromagnets during the energizing thereof, a pivot pin supporting said armature in said inactive position for oscillatory movement about a relatively fixed longitudinal axis centrally thereof and relative to said base, said pivot pin having conically shaped bearing surfaces upon the opposite ends thereof, a pair of self-aligning elements each having a conically shaped recess in engagement with one of said conically shaped ends, each of said self-aligning elements having a spherically curved exterior surface portion, a relatively thin, wide, elongated resilient arm normally fixedly carried by a part fixed relative to said base and having an elongated yieldable free end portion in spaced relation to said base, substantially axially aligned supporting means providing conically shaped recesses carried by the elongated free end portion of said arm and by said base, respectively, and engaging the spherically curved surface portions on said self-aligning elements, one of said supporting means comprising two screw-

threaded sections secured together so as to allow one section thereof to be axially adjusted substantially along said fixed axis and relative to the other of said sections and into proper pressing engagement with the spherically curved surface on the adjacent one of said self-aligning elements, whereby said self-aligning elements are readily tiltable so as to allow uniform circumferential engagement between the conical surfaces on said pin and in said elements during relative oscillatory movement therebetween, and resilient means normally carried in relatively fixed relation to said base and arranged so as to engage a part movable with said armature and to provide yieldable opposition to the oscillating movement of said armature during a predetermined portion of the travel thereof in each direction about said fixed axis.

3. An electric motor of the character described comprising a base, a pair of alternately energizable electromagnets carried by said base, an armature normally disposed in an inactive position adjacent both of said electromagnets so as to be within the magnetic fields of said electromagnets during the energizing thereof, a pivot pin supporting said armature in said inactive position for oscillatory movement about a relatively fixed longitudinal axis centrally thereof and relative to said base, said pivot pin having conically shaped bearing surfaces upon the opposite ends thereof, a pair of self-aligning elements each having a conically shaped recess in engagement with one of said conically shaped ends, each of said self-aligning elements having a spherically curved exterior surface portion, a relatively thin, wide, elongated resilient arm normally fixedly carried by a part fixed relative to said base and having an elongated yieldable free end portion in spaced relation to said base, substantially axially aligned supporting means providing conically shaped recesses carried by the elongated free end portion of said arm and by said base, respectively, and engaging the spherically curved surface portions on said self-aligning elements, one of said supporting means comprising two screw-threaded sections secured together so as to allow one section thereof to be axially adjusted substantially along said fixed axis and relative to the other of said sections and into proper pressing engagement with the spherically curved surface on the adjacent one of said self-aligning elements, whereby said self-aligning elements are readily tiltable so as to allow uniform circumferential engagement between the conical surfaces on said pin and in said elements during relative oscillatory movement therebetween, resilient means normally carried in relatively fixed relation to said base and arranged so as to engage a part movable with said armature and to provide yieldable opposition to the oscillating movement of said armature during a predetermined portion of the travel thereof in each direction about said fixed axis, said resilient means each being adjustably secured relative to said base for movement in directions substantially perpendicular to the normal inactive position of said armature, and means for securing said resilient means in any position of adjustment thereof.

4. An electric motor of the character described comprising a base, a pair of alternately energizable electromagnets carried by said base, an armature normally disposed in an inactive position adjacent both of said electromagnets so as to be within the magnetic fields of said electromagnets during the energizing thereof, a pivot pin supporting said armature in said inactive position for oscillatory movement about a relatively fixed longitudinal axis centrally thereof and relative to said base, said pivot pin having conically shaped bearing surfaces upon the opposite ends thereof, a pair of self-aligning elements each having a conically shaped recess in engagement with one of said conically shaped ends, each of said self-aligning elements having a spherically curved exterior surface portion, a relatively thin, wide, elongated resilient arm normaly fixedly carried by a part fixed relative to said base and having an elongated yieldable free end portion in spaced relation to said base, substantially axially aligned supporting means providing conically shaped recesses carried by the elongated free end portion of said arm and by said base, respectively, and engaging the spherically curved surface portions on said self aligning elements, one of said supporting means comprising two screw-threaded sections secured together so as to allow one section thereof to be axially adjusted substantially along said fixed axis and relative to the other of said sections and into proper pressing engagement with the spherically curved surface on the adjacent one of said self-aligning elements, whereby said self-aligning elements are readily tiltable so as to allow uniform circumferential engagement between the conical surfaces on said pin and in said elements during relative oscillatory movement therebetween, resilient means normally carried in relatively fixed relation to said base and arranged so as to engage a part movable with said armature and to provide yieldable opposition to the oscillating movement of said armature during a predetermined portion of the travel thereof in each direction about said fixed axis, said resilient means each being adjustably secured relative to said base for movement in directions substantially perpendicular to the normal inactive position of said armature and means for securing said resilient means in any position of adjustment thereof, said electromagnets being adjustably secured relative to said base for movement in directions substantially perpendicular to the normal inactive position of said armature.

FREDERICK W. HERR.

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Exhibit A-51

E. A. SPERRY.

CONTROLLING MECHANISM FOR SHIPS' GYROSCOPES.

APPLICATION FILED JAN. 25, 1916.

1,342,397.

Patented June 1, 1920.

3 SHEETS—SHEET 1.

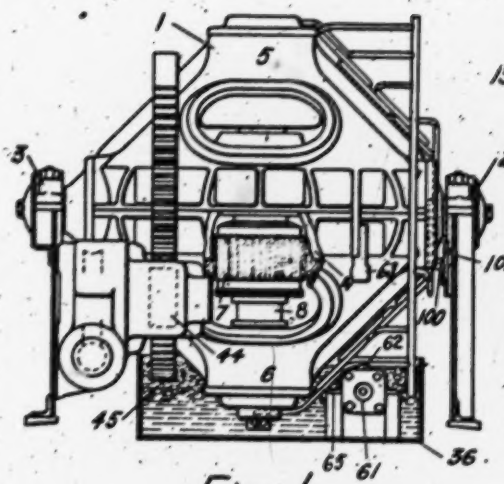


Fig. 1.

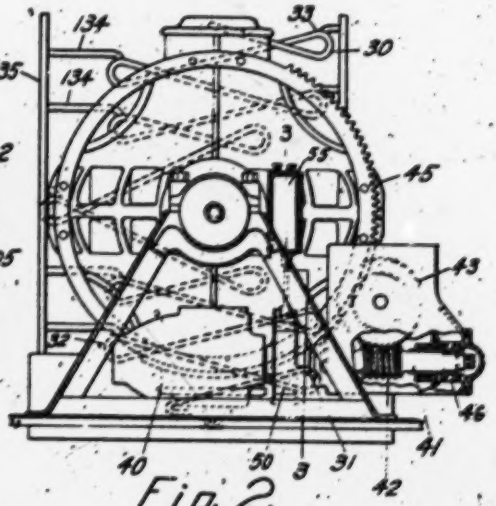


Fig. 2.

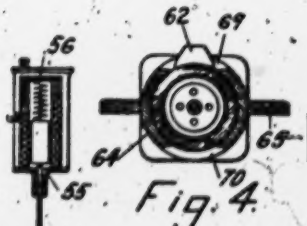


Fig. 4.

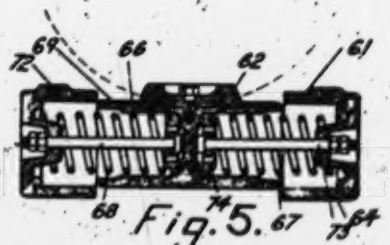


Fig. 5.

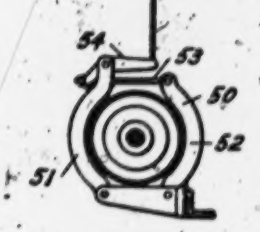


Fig. 3.

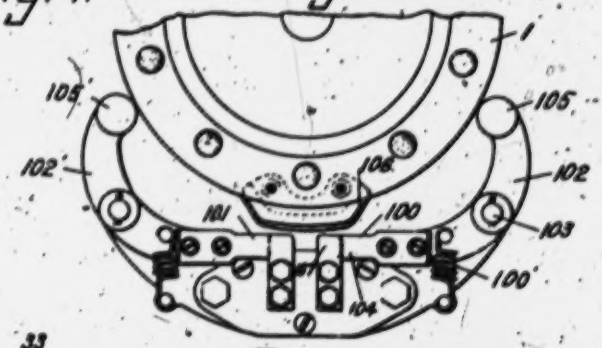


Fig. 6.



Fig. 13.

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applying brake 50 thereto, and when the precession of the gyroscope exceeds a predetermined amount. The switches to accomplish this result are shown at 100 and 101 in Fig. 10. It will be seen from this figure that each switch will open the circuit through one of the precession contacts, only, so that the instant the ship starts to roll in the opposite direction an uninterrupted circuit will be completed to drive the motor 40 in the reverse direction. Switches 100 and 101 may be constructed as shown in Fig. 6. Each switch comprises an arm 102 pivoted at 103 and provided with a switch blade 104 and knob 105. A cam 106 is secured to the gyro casing so as to strike either a knob 105 on arm 102 or the corresponding knob 105′ on arm 102′, when the gyro precesses on its gudgeons 2, 3 in one direction or the other. This engagement will break the contact between blade 104 and fixed blades 107 and thereby break the circuit through the armature of motor 40 and solenoid 55 made through contacts 108 and 109 of relay 95, which are held closed by the contact of either pair of precession contacts 90, 92 or 91 and 93 depending on the position of reversing switch 110. Each switch is normally held closed by a spring 100′. But just as soon as the ship starts to roll in the opposite direction, the other pair of precession contacts will be closed, causing the closing of contacts 111 and 112 of the relay and the completion of a circuit through the other limit switch 101 thus sending current in the opposite direction through armature 40.

The operation of my invention is, in general, as follows:—Whether the apparatus is to be used as a stabilizing or rolling device depends simply on the position of reversing switch 110. When the switch is positioned so that impulses will be imparted to the ship in the direction that it is rolling at the time, it will, of course, increase the roll and cause a continuous and increasing oscillation of the ship. Of course, in order to have the device operate in this manner, an initial slight roll must be imparted to the ship. In most cases this is imparted by the waves, but it may be done artificially by completing a contact between points 91 and 93 or 90 and 92, as by turning finger pieces 190. The motor 40 will then cause the ship to heel until the righting moment exceeds the gyroscoping moment or until limit switch 100 or 101 is reached, when it will be reversed by the opposite precession of gyroscope 75.

When the switch 110 is reversed, gyroscope 1 will stabilize the ship, as explained above. Upon the first tendency of the ship to roll the sensitive gyroscope 75 will complete a contact and cause the precession engine to exert a force about the precession axis of the main gyroscope, thereby exerting a stabilizing effect upon the ship before it has rolled to an appreciable extent. The principal advantage in employing an auxiliary gyroscope is here illustrated and is due to the fact that a gyroscope of the size and power required for stabilizing a ship is sluggish in responding to impressed forces so that an appreciable roll, sometimes as great as seven or eight degrees will be imparted to a ship before the main gyroscope will hold it, without the synchronizing aid of the small and sensitive auxiliary gyroscope, which is directly responsive to the angular velocity of roll. If the rolling impulse is powerful and continued, the force exerted by the ship upon the gudgeons of the gyroscope will be sufficient to cause the natural precession of the gyroscope to be greater than that caused by the precession engine. Therefore, as explained, the worm and worm wheel will act as a brake about the precession axis. If the rolling impulse is continued still longer, the gyroscope will strike limit switch 100 or 101 and thus stop the precession engine, and exert a powerful brake on the gyroscope. On or about the same instant the positive limit stop 62 will be struck. However, as soon as the ship starts to roll in the other direction, the control gyroscope 75 will complete the circuit through the other limit switch, which, as explained, is normally held closed, so that a stabilizing effect will immediately be exerted, so that the apparatus is at all times in phase with the roll of the ship. As the gyroscope swings back and forth upon its gudgeons the oil will be elevated from the lower bearing to the upper through my novel system of coiled tubing, and at the same time the entire gyroscope will be cooled by the lower bearing wasning through the liquid in tank 36.

In accordance with the provisions of the patent statutes, I have herein described the principle of operation of my invention, together with the apparatus, which I now consider to represent the best embodiment thereof, but I desire to have it understood that the apparatus shown is only illustrative and that the invention can be carried out by other means. Also, while it is designed to use the various features and elements in the combination and relations described, some of these may be altered and others omitted without interfering with the general results outlined, and the invention extends to such use.

I claim:

1. In a gyroscopic stabilizing or rolling apparatus, a main gyroscope mounted for precessional movements, power means for governing the precessional movement, and a limit device on said gyroscope for causing said power means to stop.

E. A. SPERRY.

CONTROLLING MECHANISM FOR SHIPS' GYROSCOPES.

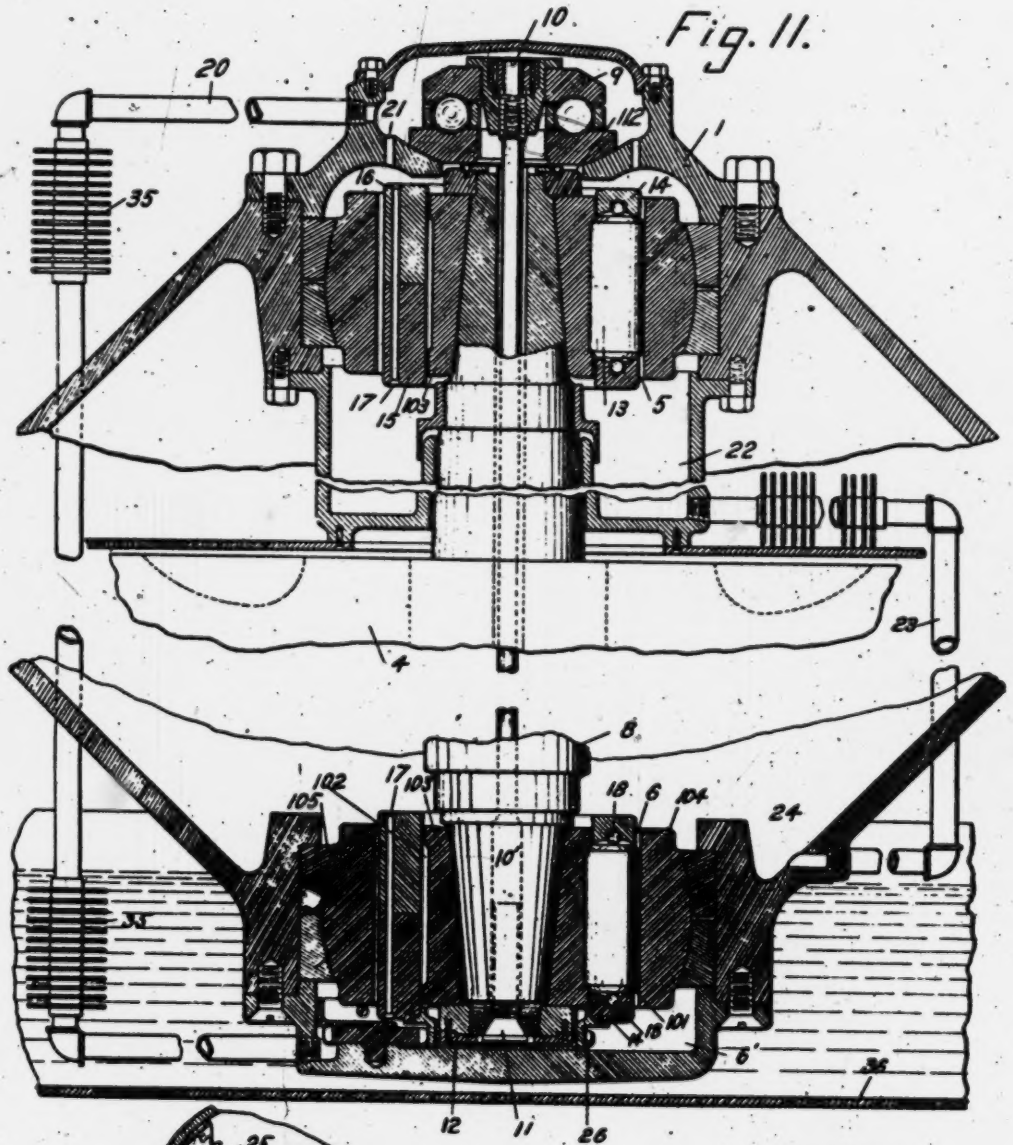
APPLICATION FILED JAN. 25, 1916.

1,342,397.

Patented June 1, 1920.

3 SHEETS—SHEET 3.

Fig. 11.



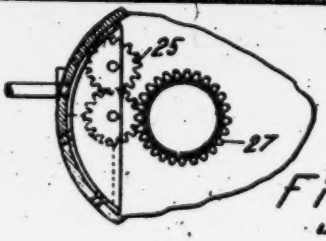


Fig. 12.

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UNITED STATES PATENT OFFICE.

ELMER A. SPERRY, OF BROOKLYN, NEW YORK, ASSIGNOR TO SPERRY GYROSCOPE COMPANY, OF BROOKLYN, NEW YORK, A CORPORATION OF NEW YORK.

CONTROLLING MECHANISM FOR SHIPS' GYROSCOPES.

1,342,397. Specification of Letters Patent. Patented June 1, 1920.

Application filed January 25, 1916. Serial No. 74,075.

To all whom it may concern:

Be it known that I, ELMER A. SPERRY, a citizen of the United States, residing at 100 Marlborough road, Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Controlling Mechanism for Ships' Gyroscopes, of which the following is a specification.

This invention relates to gyroscopes for ships of the type shown in my Patent No. 1,150,311, dated August 17th, 1915, and also in my co-pending application Serial No. 716 for ship stabilizing and rolling apparatus, filed January 6th, 1915. As explained in said specifications, gyroscopes of this type may be used either for stabilizing a ship or for rolling it, or both rolling and stabilizing at the option of the commander. The main objects of this invention are to improve upon the system of control and lubrication of these gyroscopes.

Referring to drawings in which what I now consider to be the preferred forms of my invention are shown: Figure 1 is a side elevation of a gyroscope as installed upon a ship. Fig. 2 is an end elevation thereof. Fig. 3 is a detail of the brake which operates to limit the oscillations of the gyroscope—this view being a section on line 3—3 of Fig. 2. Figs. 4 and 5 are transverse and longitudinal sections respectively of the limit stop. Fig. 6 is an enlarged view of the circuit breaking switches on the gyroscope. Fig. 7 is an elevation partly in section of the auxiliary or control gyroscope which governs or times the movement of the main gyroscope. Fig. 8 is an enlarged detail of a control switch on the auxiliary gyroscope. Fig. 9 is an enlarged section of the thrust bearing used on the worm shaft of the transmission gearing between the precession motor and the gyroscope. Fig. 10 is an elementary wiring diagram on the control connections and contacts. Fig. 11 is an enlarged section of the upper and lower bearings of the main gyroscope, showing, however, a slight modification in the oiling system. Fig. 12 is a detail of the oil gear pump used in connection therewith. Fig. 13 is a detail of the modified form of oil elevating pipe.

The main gyroscope as shown, comprises a rotor bearing frame 1, which is supported in the horizontal precession gudgeons 2 and 3, placed crosswise on the ship as indicated by the arrow in Fig. 2 representing the fore and aft line of the ship. The rotor 4 is supported in vertical bearings 5 and 6 within the frame and may be driven by any suitable means such as the armature 7 of an electric motor which may be built directly on the shaft of the rotor as indicated in Fig. 1. I prefer to construct the rotor bearings as indicated in Fig. 11. The main rotor shaft 8 is made hollow and is suspended from the thrust bearing 9 from the top of casing 1 by means of a long, comparatively slender, resilient rod 10. Throughout the greater portion of its length it is spaced from the inner walls of shaft 8 so that vibration of the shaft will not be transmitted thereto. It is enlarged within one of the bearings at 10' to center it in the shaft, but is only secured to the shaft at its lower end 11 where the rod is enlarged and serves to support the entire weight of the rotor 4 and shaft 8. Nuts 12 and 112 are secured to each end of the rotor shaft to hold the inner races 103 of bearings 5 and 6 in place upon the tapered ends of shaft 8, and also in the case of nut 12 to prevent the spreading of the shaft, where the wedging action of the cone is exerted upon the end of the rod 10. The thrust bearing 9 is preferably of the antifriction type being shown as a ball-bearing universally supported at the top of the casing 1. The large radial bearings 5 and 6 are preferably also of the antifriction type, being shown as a special type of roller bearing. The rollers 13 are supported in a cage or retainer 14 which comprises a plurality of sections 15 and 16 riveted or otherwise secured together between the rollers as indicated at 17. Preferably small balls 18 are interposed between the ends of the rollers and the cage to reduce friction at these points.

The ends 101 of the rollers are preferably beveled and the inner race 103 is provided with an annular depression 102 in which the rollers rest. The outer race 104, however, has no depressed portion, so that the rollers are free longitudinally therein. This construction not only facilitates the assembling of the bearing parts but allows free expansion and contraction of shaft 8, which feature becomes quite an important advantage in the art of stabilizing gyroscopes. Another advantage is that it does not permit the bearings 5 and 6 to support any of the

weight of the rotor, but allows the entire weight to be supported by rod 9 and thrust bearing 10, as explained above. The race 104 is universally mounted on blocks 105 in frame 1.

In order to lubricate and cool these bearings, oil is introduced through a pipe 20 into the top of casing 1 where it lubricates bearing 9. From thence it flows down through small openings 21 into and through bearing 5 and into receptacle 22. From thence it is led by pipe 23 into a lower receptacle 24 where it flows into and through the lower radial bearing 6. In Fig. 11 the oil is shown as elevated from the oil well 6′ at the bottom of bearing 6 up to the top of the casing so that it may be used again by means of a small gear pump 25, which is operated by means of a gear 26 secured to the retainer 14 of the bearing 6 with which the idler 27 which drives the gear pump meshes.

By using the retainer 14 to drive the pump, a much slower speed is attained than if the shaft 8 were used. In gyroscopes, which are operated normally at high speed, this becomes quite an advantage. In Figs. 1 and 2 a different system is employed for elevating the oil, which renders unnecessary the employment of a pump for this purpose. As is well known, a gyroscope, especially of the active type, mounted on a ship in a fairly rough sea will oscillate continuously on its precession bearings to the full extent permitted by the construction. This phenomenon is made use of to elevate the oil by employing an inclined coil or duct 30, which rises from the base of bearing 6 to the top of bearing 9 in a series of reverse bends. The coil is so designed that when the gyroscope swings to the left in Fig. 2, for instance, the oil will run down into the reverse bend 31, so that when the gyroscope swings over an equivalent amount to the right the oil there entrapped will flow down into the next reverse bend 32, and so on until the oil has risen to the top of the casing. In order to prevent the oil from running back through the tube from the reverse bends when the gyroscope swings in the opposite direction it may be found desirable to provide vents 33 which will allow the oil beyond the bend to run down into the next reverse bend and prevent it from being drawn back into the pipe into the convolution below. These vents may be closed by the flap valve 34 as indicated in Fig. 13, or a tube 134, or tubes, may be connected thereto which rise above the normal level of the oil by being connected to a normally vertical pipe 135 so that the oil cannot escape therefrom during the oscillations of the gyroscope.

In order to cool the rotor bearings, cooling ribs or vanes 35 may be provided on the oil pipes as shown in Fig. 11. I find, however, a most effective means to effect this result is to provide a large oil tank 36 adjacent the base of the gyroscope in which the lower bearing of the gyroscope normally is immersed and through which it swings when the gyroscope is operating. This oil bath is found to effectively cool the gyroscope, as, in operation, the gyroscope will continuously splash through it and thereby cause a constant circulation of the oil.

The precession engine or motor is shown at 40. As explained in my prior patents above referred to, this motor performs a very important function in accelerating the precession at proper times and thus suppressing the incipient tendency of the ship to roll before it has become noticeable. I have found, however, that by proper design of the motor and its connections with the gyroscope that it may be made to perform several additional functions. Mounted on the motor shaft 41 is a worm 42 which drives the worm wheel 43. A pinion 44 mounted on the worm wheel shaft meshes with the large gear sector 45 on the casing of the gyroscope, so that the rotation of the motor in either direction will cause forced oscillation of the gyroscope, while any tendency for the gyroscope to oscillate independently of the motor will be resisted by the worm and worm wheel connection. Since these forces exerted by the gyroscope become exceedingly powerful when the sea is rough, and since I have found it very desirable that these forces should be absorbed to a great extent, I mount on the worm shaft one or more power absorbing thrust bearings 46 (see Fig. 9). Preferably I secure to the worm shaft a collar 47 which is circumferentially grooved as at 48 and provided with oil ducts 49 so that it may be properly cooled and lubricated. The collar is mounted between fixed thrust bearing blocks 50′ and 51 so as to absorb the thrust in either direction. Said blocks are provided with radial ducts 60, which communicate with ducts 49 through the center of the blocks. Also mounted on the motor shaft or other part of the precession engine is an automatic brake mechanism 50, which is designed to be applied when the motor is rendered inoperative, or when it exceeds a predetermined speed. This mechanism preferably comprises one or more pivoted brake shoes 51 and 52 which are connected by a link 53 and bell crank lever 54, so that when the lever is thrust downwardly the brake is applied. Connected adjacent one end of lever 54 is a solenoid 55 or other electro-mechanical device which normally holds the bell crank lever 54 elevated, but if the current through the solenoid 51 should be interrupted or lessened a spring 56 therein pushes lever 54 down and applies the brake.

In addition to the above described brak-

ing means a positive stop may be provided for the gyroscope to limit its oscillations. This stop may be positioned at 61 near the base of the gyroscope so that the lug 62 is struck by one or the other of two projections 63 on opposite sides of the casing 1. The stop 61 is entirely immersed in the oil bath within tank 36. It is made up of a hollow cylindrical portion 64, secured to a base by means of side flanges 65, and a double acting spring pressed plunger 66. Said plunger is slidably mounted within the cylinder and is centrally positioned therein by means of springs 67 and 68. Lug 62 is secured to plunger 66 and projects through a cutaway portion 69 in the wall of the cylinder 64. When the projection 63, for instance, strikes lug 62 the plunger is moved against the action of spring 68, thereby quickly closing the slight clearance which exists between the end of the plunger and the closed portion of the cylinder 64 beyond the cutaway portions 69 and 70. The movement of the plunger is then powerfully resisted by the oil within the cylinder, since the oil can only escape through a small opening 72, thereby quickly bringing the gyroscope to rest. To position properly the springs within the cylinder and piston a limit device may be provided in the shape of a rod or bolt 73 provided with a washer 74 against which the inner end of the spring bears.

The electrical control of the gyroscope is effected in the main by means of an auxiliary gyro 75 (Fig. 7) which in practice is made very much smaller than the main gyro. It is shown as mounted upon a horizontal spinning axis which is placed athwartship in Fig. 7 with a vertical precession axis 77, although it is obvious that the same result may be obtained by making the spinning axis vertical as is done with the main gyro. Said auxiliary gyro is designed to control the precession motor 40 by completing contacts through its precessional movement as is disclosed in my co-pending application No. 716 above referred to. Resilient centralizing means may be provided for the gyro which may assume the form of spring pressed pins 78 and 79 which bear against the lug 80 on the gyro casing. A spring 81 is positioned between the end of each pin and an upright arm 82, which is preferably adjustable about a pivot 83 so as to vary the tension of the spring as by means of a thumb nut 183. Means are also provided to vary the sensitiveness of the gyro, since it is found that the gyro may be too sensitive in responding to slight disturbances on the ship, such as the jar of the engines, and thereby throw unnecessary work upon the main gyro. For this purpose the vertical precession pivots 77 may be provided with friction blocks 84. These blocks are pressed upon the vertical ring 85 of the gyro by means of springs 86, the tension of which may be readily adjusted by means of screw plugs 87. In addition or in place of the friction blocks just described, a brake shoe may be provided at 88 to act directly on the ring 85 at a point where its movement about the vertical axis is relatively much greater than near pivot points 77.

The precession contacts are shown only in dotted lines Fig. 7, at 89 but are shown in detail and on a larger scale in Fig. 8. The contact blocks 90 and 91 are mounted on the end of the gyro casing or ring 85, preferably by being secured to the bent spring 91′ so that a yielding and self-cleaning contact will be made thereby with the complementary contacts 92 and 93. Said contacts are mounted on brackets 94 fixed to the ship so that a circuit will be completed on precession of the gyroscope in either direction. Contacts 92 and 93 are shown as adjustable.

The precession motor 40 is controlled from said contacts through the intermediary of the reversing relay 95, shown in Fig. 10, which reverses, in the embodiment shown, the armature connections of said motor when the precession contacts are changed. As soon, therefore, as the ship starts to roll, the motor 40 is actuated to accelerate the precession and thereby damp the oscillations at their inception. If the overturning influence is continued and exceptionally strong, however, a different condition is presented, which must be met in a different way. In other words, under such conditions it is found more desirable to brake the precession than to accelerate it. I automatically accomplish this result by designing the motor to run at a comparatively constant speed, when energized, so that when a force exerted by a wave on the gyro gudgeons exceeds a predetermined amount, it will tend to cause precession of the gyro at a rate greater than the speed of the motor 40, and a powerful braking effect will be exerted through the worm wheel 43, worm 42 and power absorbing thrust bearings 46, as explained above. The brake 50 may be used to materially aid in preventing the motor 40 from being accelerated beyond a predetermined speed by connecting it in series with the motor and designing it so that when the current passing through solenoid 56 drops below a predetermined amount the brake is applied with a pressure inversely proportional to the current flowing. As motor 40 is preferably shunt wound, it will be seen that by this means an accurate speed governor is attained, since the current passing through a shunt motor varies inversely as the armature speed. This braking effect is further increased by breaking the motor circuit and

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2. In a gyroscopic stabilizing or rolling apparatus, a main gyroscope mounted for precessional movements, power means for governing the precessional movements, and a limit device on said gyroscope for rendering said power means inoperative.

3. The combination with a gyroscope, of means for controlling the oscillations thereof including a constant speed motor, a worm and worm wheel in the connections between the motor and the gyroscope and power absorbing thrust bearings for the worm.

4. The combination with a gyroscope, of means for controlling the oscillations thereof including a motor, a worm and worm wheel in the connections between the motor and the gyroscope, power absorbing thrust bearings for the worm, and means for stopping said motor at a predetermined portion of the oscillations, whereby the oscillations of the gyroscope are limited.

5. The combination with a ship's gyroscope, a precession engine for controlling said gyroscope, a controller for said engine adapted to reverse its action when the roll of the ship reverses, and a limit means adapted to render the said controller inoperative to cause said engine to operate in a predetermined direction while leaving said engine free to be operated in the reverse direction by said controller.

6. The combination with a ship's gyroscope, a precession engine for controlling said gyroscope, a controller for said engine adapted to reverse its action when the roll of the ship reverses, and a limit means mounted on the gyroscope adapted to disconnect the operative side of the controller and the engine when the precession in one direction exceeds a predetermined amount while leaving the other side of the controller free to actuate said engine in the reverse direction as soon as the ship starts to roll in the opposite direction.

7. The combination with a ship's gyroscope, of a controlling motor therefor, and a governing means for said motor including a shut-off device responsive to the precession of said gyroscope.

8. The combination with an oscillatory body of a gyroscope thereon mounted for precession with respect thereto, and a yielding limit stop for said gyroscope adapted to prevent precession of said gyroscope beyond a predetermined angle.

9. The combination with a ship's gyroscope, of a controlling motor and a brake therefor, and a governing means for said motor including a shut-off device responsive to the precession of said gyroscope for stopping the motor and applying the brake.

10. A cooling system for gyroscopes comprising a rotor, a bearing frame therefor mounted for oscillation about a horizontal axis, a receptacle adapted to contain a liquid mounted adjacent the base of said gyroscope, whereby a portion of said frame is washed through the liquid by the oscillation of the gyroscope.

11. In a vertical gyroscope having upper and lower rotor bearings and mounted for oscillation about a horizontal axis, an oiling and cooling system comprising means for raising the oil from the lower bearing to a point adjacent the upper bearing, means whereby the oil may be transferred to the lower bearing, and extraneous cooling means for said oil.

12. In a vertical gyroscope having upper and lower rotor bearings and mounted for oscillation about a horizontal axis, an oiling and cooling system comprising means for raising the oil from the lower bearing to a point adjacent the upper bearing, means whereby the oil may be transferred to the lower bearing and a receptacle adapted to contain a liquid mounted adjacent the base of said gyroscope whereby the lower rotor bearing is washed through the liquid by the oscillation of the gyroscope.

13. In a vertical gyroscope having upper and lower rotor bearings and mounted for oscillation about a horizontal axis, means for raising oil from the lower bearing to a point adjacent the upper bearing comprising a pipe coiled in such manner as to cause the gradual elevation of the oil by the oscillations of the gyroscope on its horizontal axis.

14. In a vertical gyroscope having upper and lower rotor bearings and mounted for oscillation about a horizontal axis, means for raising oil from the lower bearing to a point adjacent the upper bearing comprising a pipe coiled in a series of reverse bends connected by portions which are inclined at such an angle that their directions of inclination are reversed when the gyroscope is oscillated.

15. In a gyroscope mounted for oscillation with reference to its support, a journal bearing therefor, means for causing a circulation of oil through the bearing comprising a pipe or duct shaped in such a manner as to cause a gradual elevation of the oil from a lower to a higher point of such bearing by successive oscillations of the gyroscope.

16. In a gyroscope mounted for oscillation with reference to its support, a journal bearing therefor, means for causing a circulation of oil through the bearing comprising a pipe or duct coiled in a series of reverse bends connected by portions which are inclined at such an angle that their directions of inclination are reversed when the gyroscope is oscillated.

17. In a device subject to oscillations

about a horizontal axis, the combination with a bearing therefor of means for causing a circulation of oil through the bearing, comprising a pipe or duct shaped in such a manner as to cause a gradual elevation of the oil from a lower to a higher point of such bearing by successive oscillations of the device.

18. The combination with a gyroscope, of means for controlling the oscillations thereof including a motor, and means responsive to the speed of the motor for applying a brake, whereby the rate of precession is limited.

19. The combination with a gyroscope mounted for precession about an axis, braking means connected therewith, a control device for said means brought into operation by the extent of precession, and a second control device for said means brought into action by the speed of precession of said gyroscope.

20. The combination with a gyroscope, of means for braking the same about a precessional axis, and means responsive to precession beyond a predetermined limit for applying said braking means.

21. The combination with a gyroscope, of means for controlling the oscillations thereof including a motor, a brake for limiting the oscillations of the gyroscope, yielding means normally holding said brake applied, and electromagnetic means in circuit with said motor for withholding the brake, whereby the brake is applied whenever the current passing through the motor is reduced below a predetermined amount.

22. In combination with a gyroscope, of means for braking the same about a precessional axis, means responsive to the speed of precession for applying said braking means and means responsive to precession beyond a predetermined limit also for applying said braking means.

In testimony whereof I have affixed my signature.

ELMER A. SPERRY.

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IN THE

Supreme Court of the United States

October Term, 1968

No. [redacted]56

LEAR, INCORPORATED,

Petitioner,

vs.

JOHN S. ADKINS,

Respondent.

VOLUME I.

PETITION FOR WRIT OF CERTIORARI TO THE SUPREME COURT OF CALIFORNIA.

(Appendix in Volume II.)

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IN THE

Supreme Court of the United States

October Term, 1967
No. .....

LEAR, INCORPORATED,

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vs.

JOHN S. ADKINS,

Respondent.

VOLUME I.

PETITION FOR WRIT OF CERTIORARI TO THE SUPREME COURT OF CALIFORNIA.

(Appendix in Volume II.)

Lear, Incorporated[1] ("Lear") prays that a writ of certiorari issue to review the judgment of the Supreme Court of the State of California, entered in the above entitled case on December 14, 1967.

OPINIONS BELOW.

The opinion of the Supreme Court of the State of California, In Bank (A, pp. 1-51)[2] is reported at 67

[1]Lear, Incorporated, named as defendant in the complaint filed below on January 5, 1960, was, under a statutory merger, succeeded on June 5, 1962 by The Siegler Corporation and the name of the latter corporation was changed to Lear Siegler, Inc. at that time [C. T. 1126]. "Lear" is used in this petition to refer to Lear, Incorporated and also to its successor, Lear Siegler, Inc.

[2]References herein are as follows: "A, B, C, or D (page number)" refers to pages of an appendix to this petition, which

(This footnote is continued on the next page)

A.C. 911, 156 U.S.P.Q. 258. A prior opinion had been delivered by the District Court of Appeal of the State of California, Second Appellate District, Division Two (A, pp. 54-91), which is reported at 244 A.C.A. 100, 151 U.S.P.Q. 119; a modification of opinion was subsequently delivered by that court (A, p. 92) which is reported at 244 A.C.A. 563. Prior to the decision of the District Court of Appeal, the Superior Court of the State of California in and for the County of Los Angeles had entered a judgment on verdict in open court (A, pp. 92-93) which is unreported; had entered rulings on motions for judgment notwithstanding the verdict and, in the alternative, for a new trial (A, pp. 94-103) reported at 143 U.S.P.Q. 53; had entered a judgment for defendant notwithstanding the verdict (A, p. 104) which is unreported; and had entered an amendment to judgment (A, p. 105) which is unreported.

JURISDICTION.

The final judgment of the Supreme Court of the State of California, In Bank was dated and entered December 14, 1967 (A, p. 1). A timely petition for rehearing was denied on January 11, 1968 (A, p. 52). The decision of the California Supreme Court became the final judgment of that court on January 15, 1968. The remittitur to the trial court issued on January 15, 1968 (A, p. 52). A stay of the enforcement of the orders and judgment of the California Supreme Court

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is separately presented. "C.T. [page number]" refers to pages of the clerk's transcript from the Superior Court of the State of California. "R.T. [page number]" refers to pages of the reporter's transcript from the Superior Court of the State of California. "Ex. [number]" refers to exhibits admitted in evidence by the Superior Court of the State of California.

has been granted pending this Petition (A, p. 53). The jurisdiction of this Court is invoked under 28 U.S.C., Section 1257(3).

QUESTIONS PRESENTED.

1. Whether it is contrary to the purposes and provisions of the federal patent and antitrust laws for a licensee to be estopped from challenging the validity of the licensor's patent, particularly where the licensee has stood out from under the license agreement by notifying the licensor that he refuses to be bound by the agreement, and by asserting failure of consideration because of non-patentability of the invention and invalidity of the patent.

2. Whether it is contrary to the purposes and provisions of the federal patent and antitrust laws for a licensee under an application for patent to be estopped from challenging the patentability of the claims before any patent issues or from challenging the validity of a patent which subsequently issues.

3. Whether it is a misuse of patent rights or an antitrust violation to include in a license agreement, as interpreted by a state court, a provision which extends the monopoly of a patent by conditioning the right of the licensee to terminate the license, either before or after the patent issues, on the cessation of manufacture of the products purportedly covered by the license.

4. Whether it is contrary to the purposes and provisions of the federal patent and antitrust laws for a licensee to be estopped from challenging the validity of the licensor's patent where there is included in the license agreement, as interpreted by a state court, a pro-

vision which, in the absence of a valid patent, is in restraint of trade and unenforceable.

5. Whether it is an unlawful extension of the patent monopoly and contrary to the purposes and provisions of the federal patent and antitrust laws for a state court, in enforcing a patent under a license agreement, to ignore those basic criteria of federal patent law relating to procurement of the patent and to the interpretation of its scope which are required to be applied in the enforcement of the patent.

CONSTITUTIONAL PROVISIONS AND STATUTES INVOLVED.

The case involves the purposes and provisions of the Constitution of the United States and the federal patent and antitrust laws of the United States. The Constitutional provision is Article I, §8, Clause 8 (B, p. 121). Statutory provisions particularly involved are 35 U.S.C., Sections 101, 102(a), (b), 103, 115, 132, 154, 282 (B, pp. 121-124), 28 U.S.C., Section 1498 (B, pp. 124-125), and 15 U.S.C., Section 1 (B, p. 125).

STATEMENT OF THE CASE.

Rights under the patent laws which are of concern in this litigation were the subject of a license agreement between Lear and Adkins, who was employed by Lear in 1951.

Prior to 1951 Lear had become a major manufacturer of navigation and guidance equipment for aircraft, as well as a major supplier of such equipment for military purposes. Gyroscopes ("gyros") are an essential component of such equipment. Lear's manufacturing activities were carried on in two locations, one in Cali-

fornia, and the other in Michigan, under separate management.

Adkins had been employed for about ten years by the United States Air Force in the procurement of navigation and guidance equipment for the Air Force. In 1951 he left the Air Force and went to work for Lear at its California facility. There he developed the California Model 2156 gyro, and on February 15, 1954 he filed an application for a patent [Ex. 9] which disclosed that gyro.

Development work on another type of gyro was being conducted at Lear's Michigan facility during the time that Adkins was developing the California Model 2156 gyro. These gyros, known collectively as the Michigan[3] "steel gyros", were developed independently of Adkins (A, p. 95; R. T. pp. 550-552, 1710-1711, 2085-2088).

On September 15, 1955, Adkins and Lear entered into a license agreement[4] (C, p. 126) which superseded a preliminary agreement made at the time of his employment. Both the California Model 2156 gyro and the Michigan steel gyros were being manufactured by Lear at that time. Additional models of the steel gyros were thereafter developed from time to time by Lear in Michigan.

The license agreement, to the extent involved in this litigation, granted Lear an exclusive license under the

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[3]The terms "California" gyro and "Michigan" gyro were used throughout the trial and in the briefs to provide a clear distinction between the two products that are involved [R. T. 252, 2837, 2854].

[4]The 1955 agreement [Ex. 8] is printed in Appendix C, pp. 126-147).

aforesaid patent application under patentable claims that might be obtained by Adkins (C, pp. 129-130, §2(a)). At the date of the license agreement no patent had issued to Adkins.[5] On the assumption that certain products then being manufactured by Lear were covered by patentable claims in the application for patent, royalties were initially paid on the California Model 2156 gyros and also on some of the Michigan steel gyros.

After operating under the license agreement for approximately two years, Lear for the first time made a search and study of the prior art with reference to the claims in Adkins' patent application. As a result of this search Lear found prior art which, it believed, showed that claims of sufficient scope to cover the steel gyros were not patentable. On September 10, 1957 Lear so notified[6] Adkins and repudiated any further liability with respect to the Michigan steel gyros, and thereafter paid no further royalties on these gyros. After continuing the payment of royalties on the California Model 2156 gyros, Lear served a notice[7] of termination of the license agreement on April 8, 1959. Such notice relied upon Paragraph 2(a) (C, pp. 129-130) of the license agreement which states that Lear has the right to terminate the agreement on ninety days' prior written notice, and on Paragraph 6 (C, pp. 138-139) which states that Lear has the right to terminate the agreement in the event the U. S. Patent Office refuses to issue a patent on the substantial claims of the application.

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[5]Only Exhibit B to the license agreement is involved here. Exhibit B was Adkins' patent application which was filed on February 15, 1954 [Ex. 9].

[6]Letter of September 10, 1957; Ex. 36 (Appendix C, pp. 148-149).

[7]Letter of April 8, 1959; Ex. 39 (Appendix C, p. 150).

After the notice of termination on April 8, 1959 Lear no longer recognized the agreement as having any effect, claimed no rights under it and made no further royalty payments. Adkins' attorneys notified[8] Lear that they did not agree with Lear's notice of termination and demanded an accounting, stating that Lear would be held liable under the agreement or otherwise.

Adkins had previously amended his application several times in an endeavor to obtain allowance of claims of various types. On December 22, 1958, Adkins amended the application to add new matter to the specification. At the time of Lear's notice of termination, none of the claims had been found to be patentable. On April 30, 1959, shortly after the notice of termination and without Lear's knowledge, Adkins amended the application again to present a new set of claims [Ex. P, pp. 64-68], and the patent involved here [Ex. 10] issued as to certain of such claims on January 5, 1960.

On the date of issuance of the patent Adkins instituted suit in the Superior Court of California, asserting two causes of action. The first alleged breach of the license agreement and unjust enrichment after termination of the agreement, and the second alleged breach of an implied obligation under California statutory law and misappropriation under the common law [C. T. B-1].

On March 1, 1963 Lear instituted an action in the United States District Court for the Central District of California, No. 63-241, seeking a declaratory judgment of invalidity, unenforceability and non-infringement of Adkins' patent. This action in the federal

[8]Letter of April 20, 1959; Ex. 40 (Appendix C, p. 151).

courts has been stayed on the ground that the same issues are pending in the state court action. *Lear Siegler, Inc. v. Adkins* (9th Cir. 1964), 330 F. 2d 595 (A, pp. 106-120).

During the trial in the state court, the court ruled that Lear by its notice of April 8, 1959 had terminated the agreement, and the court so instructed the jury [C. T. 127, R. T. 239, 3080]. Following a finding by the jury for Adkins as to the California 2156 gyros in the amount of $16,351 and the Michigan steel gyros in the amount of $888,122, the Superior Court entered a judgment notwithstanding the verdict in favor of Lear concerning the Michigan steel gyros. The court held that, although Lear had fully terminated the license agreement by its notice of termination of April 8, 1959, it was estopped to deny the validity of the patent with respect to the California Model 2156 gyros. However, it held that the rule of estoppel did not apply with respect to the Michigan steel gyros on the ground that they had been developed independently by Lear.

The court then ruled that the patent which issued to Adkins on January 5, 1960 was invalid, that the Michigan steel gyros did not infringe any claims of the patent, even if valid, and that Lear was not liable for royalties on the Michigan steel gyros under either cause of action. However, the court held that Lear was liable in the amount of $16,351 for royalties on the California Model 2156 gyros on the unjust enrichment theory of the first cause of action, even after termination of the agreement on April 8, 1959 (A, pp. 94-102).

The Superior Court also granted Lear's motion for a new trial on all issues in the alternative in the event

of a reversal of the judgment notwithstanding the verdict (A, p. 103).

The District Court of Appeal held that Lear was not estopped to contest the validity of the patent which ultimately issued to Adkins on the ground that after termination of a license agreement the parties are freed from any estoppel, and thereafter the licensee may attack the validity of a patent issued to the former licensor. However, the court went on to rule that the validity of the patent was not in issue because Lear's notice of termination effectively terminated the agreement as of April 8, 1959 for all purposes, and that Lear was not obligated to pay royalties on either the California Model 2156 gyros or the Michigan steel gyros after the date of termination (A, pp. 54-91).

Despite the consistent rulings and decisions of the two courts below, the California Supreme Court construed the license agreement to condition Lear's right to terminate under §2(a) only upon cessation of manufacture of the products purportedly covered by the license (A, pp. 23-28), and held that since Lear had not ceased such manufacturing, the agreement was still in effect (A, p. 28). The court also held that Lear was estopped from contesting the validity of Adkins' patent for any purpose (A, p. 16), despite the trial court's holding that the patent was invalid as a matter of law (A, p. 99).

The California Supreme Court construed Adkins' patent to cover the Michigan steel gyros, even though the trial court had ruled to the contrary, and further held there was no substantial evidence showing that the Michigan steel gyros were not covered by Adkins' patent (A, pp. 28-29). That court also refused to accept

Lear's notice of September 10, 1957 as an effective repudiation with respect to the Michigan steel gyros (A, p. 28).

The California Supreme Court also reversed the order of the trial court which had granted a new trial on the factual issues of infringement and on the intent of the parties as to the meaning of the termination provisions of the license agreement (A, p. 51).

The California Supreme Court's decision subjects Lear to a liability of over $900,000 to May 31, 1963, and, on the basis of the court's holdings, to additional liability to the extent products purportedly covered by the agreement are manufactured by Lear until the expiration of Adkins' patent in 1977, and possibly even longer, under the court's construction of the agreement.

STATEMENT OF THE MANNER IN WHICH THE FEDERAL QUESTIONS WERE RAISED—*in Compliance With Rule 23(f).*

The Raising of Questions 1 and 2.

Questions One and Two relate to the right of a licensee to challenge the patentability of the claims of the licensor's patent application and the validity of the licensor's subsequently issued patent. Patentability of claims and the validity of a patent are controlled solely by federal law enacted pursuant to the United States Constitution, Article I, §8, Clause 8. The purposes and provisions of the federal patent and antitrust laws override any local rules of estoppel where patentability of an invention or validity of a patent are involved. *Sola Electric Company v. Jefferson Electric Company* (1942), 317 U.S. 173; *Scott Paper Co. v. Marcalus Mfg. Co.* (1945), 326 U.S. 249; *Katzinger v. Chicago*

Metallic Mfg. Co. (1947), 329 U.S. 394; *MacGregor v. Westinghouse Elec. & Mfg. Co.* (1947), 329 U.S. 402.

So far as relevant in this case, the license granted[9] to Lear was under each of those claims in Adkins' application for a patent [Ex. 9] as "shall be patentable" by Adkins. Adkins represented and warranted that to the best of his knowledge and belief he was the owner of the invention covered by such claims (C, p. 126 §(B)). The complaint alleges full performance of the agreement by Adkins [C. T. B-1], and Lear's answer denies such performance [C. T. B-25].

The issues of federal law concerning estoppel presented by Questions One and Two arose before the Superior Court, and indeed could arise, only after (a) the challenge by Lear of the patentability of Adkins' claims and the validity of his patent, and (b) the subsequent assertion by Adkins that Lear was estopped to make any such challenge. In response to this assertion, Lear in the following instances took the position that it was not so estopped:

A. Before the Superior Court.

1. In reply to Adkins' opposition, on the ground of licensee estoppel [C. T. 349-351], to Lear's motion to file an amended answer asserting unpatentability of the claims of the application and invalidity of Adkins' patent [C. T. 155, 156], Lear asserted that the doctrine of licensee estoppel was inapplicable [C. T. 367-371], and particularly so where an application for patent is in-

[9]Only the portion of §2(a) of the license agreement (C, pp. 129-130) which relates to an exclusive license under Exhibit B to the agreement is involved here, which license became nonexclusive subsequent to Lear's repudiation with respect to its Michigan steel gyros.

volved [R. T. A-448]. The court denied the motion to amend the answer on other grounds [C. T. 481].

2. Adkins refused to answer interrogatories and questions on deposition on the grounds that patentability of the claims of the application and validity were not in issue in the case and that Lear was estopped to raise these questions [C. T. 598-601, 994-996, 1392]. Lear requested the court to require answers on the ground that it was not so estopped [C. T. 1417]. After a ruling that Lear was so estopped [R. T. A-1372]. Lear unsuccessfully sought a writ of mandate from the District Court of Appeal to direct that the Superior Court require such answers on the ground that Lear was not estopped to raise those issues [R. T. A-1495-1496].

3 In its pretrial statement, Lear challenged the patentability of the claims of Adkins' patent application and the validity of his patent [C. T. 1441, § 12], and asserted that it was not estopped to make such challenge [C. T. 1446-7, §28; C. T. 1448, §§34, 35]. Furthermore, prior to trial, Lear moved to file an amended answer asserting failure of consideration based on such non-patentability and invalidity [C. T. 1344]. Lear's motion was denied at that time, but was subsequently allowed during the trial [C. T. 1398].

4. Lear filed trial memoranda citing numerous federal authorities and asserted that because of the public interest in eliminating invalid patents, a licensee is not estopped to show that the alleged invention is in the public domain [C. T. 1644-1645; 2409-2410].

5. After an offer of proof made during the trial, Lear was granted leave by the Superior Court to file

an amended answer asserting failure of consideration with respect to all causes of action in that Adkins' application and the patent which ultimately issued thereon did not disclose a patentable invention [C. T. 1653-Fifth Defense; R. T. 2057, 2317]. Over Adkins' objection [R. T. 1135-1136], the court admitted evidence offered by Lear as to the unpatentability of the claims of Adkins' application for a patent and the invalidity of the patent that ultimately issued on January 5, 1960. However, the court subsequently held, in ruling on jury instructions requested by Lear [R. T. 2838] and on Lear's motion at the end of the trial for judgment notwithstanding the verdict, that such evidence, although relevant on the issue of validity with respect to the Michigan steel gyros (A, pp. 94-95; R. T. 1066) was not relevant as to the California Model 2156 gyros. This latter ruling was based on the ground that Lear was estopped to challenge the validity of the claims of the application or the patent so far as the California Model 2156 gyros were concerned even though the court had ruled that the agreement was terminated (A, p. 94).

6. In its motion for judgment notwithstanding the verdict, Lear specially set up as a defense that the standard of patentability is a Constitutional standard, and that Adkins' patent does not satisfy that standard as defined by this Court [C. T. 1888; 1891; 1898; 1902]. The Superior Court granted the motion with respect to the Michigan steel gyros and the court ruled that Adkins' patent fails to meet the Constitutional standard (A, pp. 98-101).

B. Before the District Court of Appeal and Before the California Supreme Court.

Under California procedure the portion of the judgment appealed must be specified, but no assignment of errors or the like is required or permitted. The errors and issues presented to the appellate court are set forth in the briefs of the parties.[10] When the California Supreme Court grants a petition for hearing with respect to a decision by the District Court of Appeal, the entire record before the District Court of Appeal, including the briefs, becomes the record before the California Supreme Court. New briefs are not ordinarily permitted and were not presented here. The federal questions presented in Questions 1 and 2 were preserved in the appeals, as follows:

1. Lear appealed from the judgment of the Superior Court in favor of Adkins with respect to the California Model 2156 gyros [C. T. 2903], which was based upon the ground that Lear was estopped to contest the patentability or validity of Adkins' claims and patent.

2. With respect to the California Model 2156 gyros, Lear preserved the federal questions that were pertinent under the circumstances of the Court's rulings, by contending as follows:

(a) that the public is an interested party in patents, and the mere existence of a license agreement does not estop the licensee from contesting validity in view of the public interest involved (D, pp. 168-171);

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[10]In view of the California procedure, the briefs filed by both parties have been made part of the record certified to this Court. Portions of the briefs relied upon in compliance with Rule 23(f) are set forth in Appendix D.

(b) that licensee estoppel could not survive termination of the license agreement by Lear's notice of April 8, 1959 (D, pp. 160-162, 171);

(c) that licensee estoppel does not apply in any event where there is an application for a patent and the patent issues subsequent to the granting of the license (D, pp. 164-165);

(d) that estoppel to contest patentability or validity does not apply in the case of a defense of failure of consideration with respect to any obligation, either under the agreement or apart from the license agreement, such as unjust enrichment (D, pp. 160, 162, 163);

(e) that any imposition of liability apart from the license agreement, based upon estoppel or otherwise, would in substance result in enforcement of Adkins' invalid patent under guise of state law (D, pp. 152-153, 162, 174, 175);

(f) that even if the license agreement had not been terminated, Lear was not estopped to challenge, and by its notice of April 8, 1959 had challenged, the patentability of the claims of the application and the validity of the patent which ultimately issued, with respect to the California Model 2156 gyros as well as the Michigan steel gyros; having earlier also made this challenge with respect to the Michigan steel gyros by its repudiation of the license by its notice of September 10, 1957 (D, pp. 164, 165); and

(g) that Adkins' application and the patent which ultimately issued fail to meet the standard required by Article I, §8, Clause 8, of the United States Constitution, and the statutory provisions

enacted pursuant thereto, particularly 35 U.S.C., Sections 101, 102 and 103 (D, pp. 155-157, 159, 160, 166-172).

3. Adkins concurrently appealed that court's judgment notwithstanding the verdict in favor of Lear with respect to the Michigan steel gyros [C. T. 2106], which was based upon the ground that Lear was not estopped to contest patentability or validity, and also that Adkins' patent was invalid as a matter of law.

4. With respect to the Michigan steel gyros, Lear preserved the federal questions that were pertinent under the circumstances, by asserting as follows:

(a) that the patentability of the claims of the application and the validity of Adkins' patent were properly before the court concerning matters that occurred both before and after the notice of termination on April 8, 1959 (D, pp. 176, 178-180, 185-187);

(b) that in any event Lear is not estopped to contest the validity of Adkins' patent after the notice of termination on April 8, 1959 (D, p. 24);

(c) that Adkins' patent is invalid under the United States patent laws, and particularly 35 U.S.C. 101, 102, and 103 (D, pp. 181-184); and

(d) that Adkins has no protectible property rights under the Constitutional standard for patentable inventions and also under the United States patent laws, and hence the judgment notwithstanding the verdict should be affirmed (D, pp. 176-178, 183, 184, 187, 188).

5. The District Court of Appeal, in holding that the license agreement had been terminated by Lear's notice of April 8, 1959 and that there was no liability after such termination with respect to either type of gyro, held that none of the claims of Adkins' patent application was patentable "'. . . under the standard of Art. I, § 8, ch. 8, of the Constitution and under the conditions prescribed by the laws of the United States,' (*Graham v. John Deere Co.*, 383 U.S. 1 . . .)" (A, pp. 67-68). In thus passing on the patentability of these claims, that court accepted and applied Lear's contention that it was not estopped to contest their patentability. As to Adkins' assertion that Lear was estopped to contest the validity of the issued patent (as distinguished from the patentability of the claims), the court held that the validity of the patent was not in issue (A, p. 71).

6. The California Supreme Court held that the patentability or validity of the claims of Adkins' application was immaterial and could not be contested by Lear (A, p. 18), and for the first time held that the agreement had not been terminated because Lear had not ceased manufacturing the products. It then ruled:

> "It follows also that the doctrine of licensee estoppel is applicable and Lear is foreclosed from challenging the validity of Adkins' patent." (A, p. 28).

7. Lear again claimed in its petition for rehearing before the California Supreme Court that it was not estopped to contest patentability of the claims of the application or validity of the patent (D, pp. 191-195).

The Raising of Questions 3 and 4.

Although the patent laws give the owner of an issued patent "the right to exclude others from making, using, or selling the invention throughout the United States" (35 U.S.C., Section 154), the applicant under an application for a patent is not given such a right. Hence federal questions are involved in determining whether there is a misuse of patent rights or a violation of the antitrust laws where, as here, under the provisions of a license agreement (as interpreted by a state court), the applicant for a patent requires that, as a condition of exercising a right of termination granted in the agreement, the licensee must cease the manufacture of products purportedly covered by the claims of his application. 15 U.S.C., Section 1. *Brulotte v. Thys Co.* (1964), 379 U.S. 29; *Scott Paper Co. v. Marcalus Mfg. Co.*, *supra*, and *Sola Electric Company v. Jefferson Electric Company, supra.*

These federal questions did not arise in the course of the proceedings in the Superior Court because that court had ruled that the agreement was terminated by the notice given on April 8, 1959. The issue was eliminated on May 7, 1963 when, prior to trial, the Superior Court ruled in discovery proceedings that "there is no doubt that Lear had the right to terminate its license agreement" [C. T. 129]. During the trial, Lear attempted to introduce evidence in the form of representations made by Adkins leading up to consummation of the agreement, that Lear's right to terminate on ninety days' written notice would be unconditional. Adkins' objections to the introduction of such evidence and to questions concerning any obligation to cease manufacturing as a condition to termination were sustained by the court [R. T.

1683-1685; 1816-1823]. Hence the Superior Court eliminated this issue from the case despite Adkins' contention that such a condition should be implied. The District Court of Appeal followed the Superior Court's determination that the agreement was terminated by Lear's notice of April 8, 1959.

Thus, the question as to the validity and effect, as a matter of federal law, of a provision which would have required Lear to cease the manufacture of products purportedly covered by the claims of the application for a patent, as a condition to termination, was first introduced by the decision of the California Supreme Court when it construed the agreement to include such a condition.

In its petition for rehearing before the California Supreme Court, Lear presented the question of misuse of patent rights and antitrust violation by extension of the patent monopoly through conditioning the right of a licensee under a patent application to terminate upon cessation of manufacture of products (D, pp. 195-198). In this petition Lear also asserted that licensee estoppel does not apply where the license contains a provision in restraint of trade (D, pp. 189, 190). The petition for rehearing was denied without a hearing.

In view of the fact that the decision of the California Supreme Court provided the first instance in which the license agreement was so interpreted, there had been no prior occasion or need for Lear to urge either (1) that such a provision constituted a misuse of patent rights and an antitrust violation, or (2) that since any such provision was invalid in the absence of a valid patent, Lear, as a matter of federal law, could not be estopped from challenging the patentability of Adkins' claims or the validity of his patent.

The Raising of Question 5.

In enforcing a patent under a license agreement, the same criteria are required to be applied as are applicable in enforcing a patent under the patent law. Such criteria relate to the procurement of the patent and to the application of established standards for interpreting the scope of the patent. These criteria are determined exclusively by federal law. Whether or not a state court follows such basic criteria is a federal question because uniform standards are required in order to achieve the purposes of the patent laws. *Sears, Roebuck & Co. v. Stiffel Co.* (1964), 376 U.S. 225. The requirements which are primarily involved here are set forth in 35 U.S.C., Sections 101, 102(a), (b), 103, 115, 132, and 282.

In challenging the proceedings involved in the procurement of Adkins' patent, Lear moved on two occasions for leave to file an amended answer, asserting that new matter had been added to Adkins' patent application by amendment in violation of 35 U.S.C., Section 132, and also asserting fraud on the Patent Office in that Adkins filed false oaths under 35 U.S.C., Section 115 stating that the matter added by amendment was part of his original invention [C. T. 149, 1653]. Both motions were denied by the Superior Court [C. T. 481, 1652].

In challenging the scope of Adkins' patent, Lear in its proposed instructions to the jury [R. T. 3299-3325] and in its motion for judgment notwithstanding the

verdict [C. T. 1904-1907] asserted that the basic criteria of the federal patent laws control. In the instructions given to the jury and in granting Lear's motion, the Superior Court employed such basic criteria of the federal patent laws and accordingly construed Adkins' patent to cover only the California Model 2156 gyros and not the Michigan steel gyros [R. T. 2677; 3079-3107; C. T. 1881].

In Lear's briefs before the District Court of Appeal, the impropriety of the proceedings before the Patent Office, in particular, the addition of new matter by amendment and fraud, were set forth as issues with respect to both types of gyros (D, pp. 158, 159, 163, 172, 173, 174, 184, 185, 187, 188). In those briefs Lear also urged that in accordance with the basic criteria of the federal patent law Adkins' patent could not be construed to cover "things" in the public domain, such as the method of assembly which had been claimed, with the claims being rejected and cancelled from the application. In conformity with the criteria known as the "doctrine of file wrapper estoppel," the claims of the patent must be interpreted in accordance with the file history showing the proceedings in the Patent Office, even though the claims of the pattent are "new" claims (D, pp. 183, 184).

The District Court of Appeal held not only that the license agreement had been terminated by Lear's notice of April 8, 1959, but that Adkins' invention as claimed was not patentable (A, pp. 70, 73). Accordingly, it was not necessary for that court to consider, nor did it con-

sider, the infirmities that Lear asserted that would render Adkins' subsequently issued patent unenforceable (A, pp. 74, 85).

As noted above, the briefs filed in the District Court of Appeal constituted the briefs filed with the California Supreme Court. Hence the federal issues with respect to improper procurement of Adkins' patent and the scope of Adkins' patent which had been raised by Lear were thereby presented to the California Supreme Court. However, that court deemed it unnecessary to consider the deficiencies in the proceedings before the Patent Office, specifically holding that the issues of addition by Adkins of new matter to the application by amendment and as to fraud on the Patent Office were not relevant (A, pp. 21, 46).

With reference to the issue of interpretation of the scope of the patent, the California Supreme Court construed the claims broadly enough to cover not only the California Model 2156 gyros, but also the Michigan steel gyros. In doing so, it enlarged the patent monopoly by not employing those basic criteria of the federal patent law which Lear set forth in its briefs.

REASONS FOR GRANTING THE WRIT.

I.

THE NEED FOR REVIEW OF THE ISSUES RELATING TO LICENSEE ESTOPPEL RAISED BY QUESTIONS ONE AND TWO.

The validity of patents is involved in virtually every license agreement. Such agreements affect major segments of the economy, including the procurement of equipment for the armed services, which is involved here.

This Court has stated that it is in the public interest that invalid patents be exposed, *Pope Mfg. Co. v. Gormully* (1892), 144 U.S. 414; that it is the public interest which is dominant in the patent system, *Mercoid Corp. v. Mid-Continent Investment Co.* (1944), 320 U.S. 661; and that the licensee under a patent license is often the party in the best position to promote the public interest by showing invalidity of the licensed patent. *Katzinger v. Chicago Metallic Mfg. Co., supra.*

The Solicitor General of the United States, in similar prior cases, has advocated the complete abolition of licensee estoppel as being against the purposes and provisions of the federal patent and antitrust laws, *Katzinger v. Chicago Metallic Mfg. Co., supra; MacGregor v. Westinghouse Elec. & Mfg. Co., supra.*

This Court on many occasions has ruled that the doctrine of licensee estoppel does not apply under the circumstances there presented. *Pope Mfg. Co. v. Gormully, supra; Sola Electric Company v. Jefferson Electric Company, supra; Scott Paper Co. v. Marcalus Mfg. Co.* (1945), 326 U.S. 249; *Katzinger v. Chicago Metallic Mfg. Co., supra; MacGregor v. Westing-*

house Elec. & Mfg. Co., supra; United States v. United States Gypsum Co. (1947), 333 U.S. 364.

Licensee estoppel has been applied by this Court only in *United States v. Harvey Steel Co.* (1905), 196 U.S. 492, and *Automatic Radio Manufacturing Co. v. Hazeltine Research, Inc.* (1950), 339 U.S. 827, both of which involved unique circumstances and are not determinative with respect to the broad aspects of licensee estoppel which are presented by Questions One and Two.

In *United States v. Harvey Steel Co., supra,* this Court held that licensee estoppel applies with respect to the user of a patented article under an agreement concerning a secret process, where the agreement held the licensee harmless from claims of infringement of the patent rights pertaining to the process.

In *Automatic Radio Manufacturing Co. v. Hazeltine Research, Inc., supra,* this Court ruled that licensee estoppel applies where the licensee did not renounce the license agreement and, after being sued, merely pleaded a partial failure of consideration in that ten of about seven hundred patents or applications were alleged to be invalid. Although the majority of the Court were of the opinion that licensee estoppel applied under those unique circumstances, Mr. Justice Douglas, with whom Mr. Justice Black concurred, was of the opinion that a licensee should never be estopped to contest validity. The dissenting opinion states, 339 U.S. 827, 840:

> "It is only right and just that the licensee be allowed to challenge the validity of the patents. . . . No other person than the licensee will be interested enough to challenge them. He alone will be apt to see and understand the basis of their illegality.

"The licensee protects the public interest in exposing invalid or expired patents and freeing the public of their toll. He should be allowed that privilege."

A similar view was recently expressed by Mr. Justice White in *United States v. Singer Mfg. Co.* (1963), 374 U.S. 174, where he noted in his concurring opinion at page 200:

". . . that public policy favors the exposure of invalid patent monopolies before the courts in order to free the public from their effects. Thus a licensee may not be prevented from attacking the validity of his licensor's patent."

Subsequent to this Court's decision in *Automatic Radio, supra,* this Court resolved some uncertainty as to the law governing the questions of patentability of an invention and validity of a patent by holding that such questions are ultimately questions of federal law. *A. & P. Tea Co. v. Supermarket Corp.* (1960), 340 U.S. 147. This was reiterated in *Graham v. John Deere Co.* (1966), 383 U.S. 1. Since this Court has already ruled that local rules of estoppel will not be permitted to thwart the purposes of the federal statutes and policies, *Sola Electric Company v. Jefferson Electric Company, supra,* licensee estoppel should have no application where a question of federal law, such as validity of a patent, is in issue.

Question One presents the circumstances in which the issue of licensee estoppel is most likely to occur, that is, where the licensee discovers unpatentability and invalidity, renounces the agreement and asserts failure of consideration in that the patent rights are invalid. This

question of licensee estoppel has not been determined by this Court. The lower courts are in confusion on this question. The decision below is in direct conflict with certain decisions of courts in other states and with certain decisions of the federal courts.

The decision of the California Supreme Court in this respect conflicts directly with *Bucky v. Sebo* (2nd Cir. 1953), 208 F. 2d 304; *Holmes, Booth & Haydens v. McGill* (2nd Cir. 1901), 108 Fed. 238; *Mudgett v. Thomas* (Circuit Court Ohio 1893), 5 Fed. 645; and *Brown v. Lapham* (Circuit Court N.Y. 1886) 27 Fed. 77. In the last-mentioned case, the court stated:

> ". . . When he [the licensee] stands out from under the license, and claims nothing from it, and does nothing more under it, with full knowledge to the licensor of his position, he would appear to be at as full liberty to contest the patent as any one."

The decision below also conflicts directly with *Crew v. Flanagan* (Minn. Supreme Court 1954), 65 N.W. 2d 878, 102 U.S.P.Q. 324, where the court held that licensee estoppel does not apply where the license is repudiated for failure of consideration. The court reviewed authorities and stated:

> ". . . But the view now supported by the weight of authority in recent cases is that the licensee may dispute the validity of the patent under which he is licensed after he has repudiated the license, even though such patent has not been shown to be invalid in third-party proceedings."

Authorities contrary to the statement from the *Crew* case include:

Hall Labs, Inc. v. National Aluminate Corp. (3rd Cir. 1955), 224 F. 2d 303;

Buckingham Products Co. v. McAleer Mfg. Co. (6th Cir. 1939), 108 F. 2d 192;

Eastern States Petroleum Co. v. Universal Oil Co. (1938), 22 Del. Ch. 333, 2 A. 2d 138, 37 U.S.P.Q. 834.

As to Question Two this Court indicated in 1924 that estoppel to contest claims of an application for a patent may be subject to different considerations than are applicable to issued patents, but the court found it unnecessary to decide this question at that time. *Westinghouse Electric & Manufacturing Company v. Formica Insulation Company* (1924), 266 U.S. 342. That case involved the assignment of an application for a patent. With respect to estoppel of the assignor of the application to contest validity in a suit by the assignee alleging infringment of the subsequently-issued patent, the Court observed;

> ". . . The case before us, however, concerns assignment of an invention and an inchoate right to a patent therefor before the granting of it, which, after the assignment at the instance of the assignee, ripened into a patent. . . . When the assignment is made before patent, the claims are subject to change by curtailment or enlargement by the Patent Office with the acquiescence or at the instant of the assignee, and the extent of the claims to be allowed may ultimately include more than the assignor intended to claim. This difference might justify the view that the range of relevant and competent evidence in fixing the limits of the subsequent estoppel should be more liberal than in the case of an assignment of a granted patent. How this may be, we do not find it necessary to decide."

The reasons expressed by Chief Justice Taft in the opinion in the *Westinghouse* case for not applying estoppel in the case of assignment of a patent application, as to the inchoate rights with respect to the claims of the application, are even more cogent where, as here, the patent was issued only after all of the claims had been rejected and cancelled and new claims were added.

Moreover, estoppel with respect to an assignor of a patent or of a patent application is based upon the ground that one who has represented that he made an invention and has received monetary consideration for the assignment should not be permitted to contest the validity of the rights which were assigned. However, with respect to a license, these considerations apply only to the licensor. The licensee does not ordinarily represent that the patent application discloses an invention, and he receives only a grant of legal rights in the event a patent issues.

There is no reason for any application of licensee estoppel with respect to a license under a patent application. This is particularly true where, as here, the application is altered by amendments after consummation of the license.

Whether or not any estoppel of a licensee under an application for a patent is consistent with the purposes and provisions of the federal patent laws was also questioned in at least two cases subsequent to the decision in the *Westinghouse* case: *Baldwin Rubber Co. v. Paine & Williams Co.* (6th Cir. 1939), 107 F. 2d 350. *Stubnitz-Greene Spring Corporation v. Fort Pitt Bedding Co.* (6th Cir. 1940), 110 F. 2d 192.

The application of estoppel coupled with a license agreement, as construed by the state court, could effectively extend the life of an agreement indefinitely and extend the patent monopoly of the licensor in contravention of the patent and antitrust laws.[11]

II.

THE NEED FOR REVIEW OF THE ISSUES RELATING TO PATENT MISUSE AND ANTITRUST VIOLATION RAISED BY QUESTIONS THREE AND FOUR.

The issues relating to patent misuse and antitrust violation which are raised by Questions Three and Four stem from the fact that the California Supreme Court erroneously construed the agreement to include a requirement that the licensee must have ceased the manufacture of all products purportedly covered by the claims of the patent application as a condition to termination of the license agreement. By ruling that the contract was to be interpreted to incorporate such a condition, and that such condition was valid, the court was in substance determining that Adkins' application for a patent was tantamount to a valid patent.

The public interest urgently calls for the review by this Court of the issues raised by such a ruling, since, in principle, it contravenes the essential restrictions on patent monopoly required by the decisions of this Court.

---

[11]This is especially true where a court construes a license to "cover not only patented or patentable claims disclosed or intended to be disclosed by the application attached as Exhibit B to the agreement but also such claims in other applications filed for different but *related* inventions revealed by the exhibit." (A, p. 18). [Italics added.] Thus the licensee would even be estopped to contest the validity of a patent issuing on an application which wasn't even in existence at the time the agreement was executed.

The decision below implied and approved a contractual requirement that a licensee must cease the manufacture of certain products (a) in order to terminate the license even before any patent issues under a pending application, and (b) in order to terminate the license after a patent issues under the application, regardless of whether the patent is valid or invalid. This decision conflicts in principle with the decisions of this Court in *Brulotte v. Thys* (1964), 379 U.S 29, and *United States v. Masonite Corporation* (1942), 316 U.S. 265, where the extension of a patent monopoly by agreement was condemned; and *Sears, Roebuck & Co. v. Stiffel Company, supra,* and *Compco Corp. v. Day-Brite Lighting, Inc.* (1964), 376 U.S. 234, where the extension of the patent monopoly under guise of state law was condemned.

The erroneous interpretation given to the termination provision of the agreement by the California Supreme Court results in an extension of the patent monopoly by agreement before the issuance of the patent, which conflicts with the decision of this Court in *Brulotte v. Thys, supra.* That case condemns an extension of the monopoly by agreement beyond the expiration date of the patent. The only difference is that in this case the extension was prior to the beginning of the monopoly and in *Brulotte* it was after the expiration of the monopoly.

Adkins had no vested rights while his application was pending, since "Until the patent is issued there is no property right in it [the invention], that is, no such right as the inventor can enforce." *Marsh v. Nichols, Shepard and Company* (1888), 128 U.S. 605, 612.

Lear served its notice of termination while the application was pending. To require that Lear cease manufacturing products in order to make the termination effective is an agreement in restraint of trade which cannot be justified by the federal patent law. It directly violates 15 U.S.C. section 1.

Furthermore, the application of licensee estoppel and the construction of the agreement to require cessation of manufacture as a condition to termination result in an extension of the patent monopoly under guise of state law and leave the licensee with no remedy.[12] This conflicts with the federal patent policy set forth by this Court in *Sears, Roebuck & Co. v. Stiffel Company, supra,* to the effect that a state cannot give a protection of a kind that clashes with the objectives of the federal patent laws.

There is a direct conflict between the decision below and the decisions of this Court in those cases involving agreements having provisions that are in restraint of trade. The only difference between the practices that have been approved by the California Supreme Court and those which have been condemned by this Court is the nature of the restraint. The restraint here is a requirement to cease manufacturing products, and the restraint that has been uniformly condemned by this Court is price fixing. *Sola Electric Company v. Jefferson Electric Company, supra; MacGregor v. Westinghouse Elec. & Mfg. Co., supra; Katzinger v. Chicago Metallic Mfg. Co., supra; United States v. Masonite Corporation, supra.*

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[12]This is particularly true where the trial judge held the patent to be invalid after an extensive trial during which the issued patent and prior art were considered by expert witnesses for both parties.

Both types of restraint are in violation of the law unless they are carried on under the protection of a valid patent. This Court has held that absolute validity is required and not merely presumptive validity in order to prevent such a restraint from being illegal.[13] The enforcement by the California Supreme Court of a requirement that the licensee must cease manufacture in order to terminate the license or challenge the validity of his licensor's patent conflicts directly with the decision in the Second Circuit in *Nachman Spring-Filled Corporation v. Kay Mfg. Co.* (2nd Cir. 1943), 139 F. 2d 781. The court in the *Nachman* case held that the Sherman Act renders unlawful not merely price fixing agreements but all agreements which in any way unreasonably restrain competition in interstate commerce. The court's opinion in that case stated that if the effect of the agreement would be unreasonably to restrain competition, then only the validity of the patent can rescue the agreement from the jaws of the antitrust laws.

Any restraint in performance of a Government contract is against public policy, as evidenced by 28 U.S.C., section 1498, which provides that claims for patent infringement must be made against the Government in the Court of Claims for damages only, thereby avoiding any legal action which might require a contractor to cease manufacturing essential military equipment.[14]

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[13]The issuance of a patent gives rise to the presumptive validity under 35 U.S.C., section 282.

[14]Sales of the California 2156 gyros and the Michigan steel gyros were primarily to the Government for military equipment (A, p. 95) [R. T. 1950-1979].

III.

THE NEED FOR REVIEW OF THE ISSUES RELATING TO THE IGNORING BY A STATE COURT OF BASIC CRITERIA OF FEDERAL PATENT LAW RAISED BY QUESTION FIVE.

Question Five involves the issue whether a state court, by ignoring basic criteria of federal patent law which relate to the propriety of the Patent Office proceedings and to the application of proper standards for interpreting the scope of a patent, may extend the patent monopoly in contravention of the purposes and provisions of the federal patent and antitrust laws. The effect of such state court action is to enlarge patent rights beyond the limits of federal patent law. Any such enlargment, whether by private agreement or by application of state law, has been condemned by this Court. *United States v. Masonite Corporation, supra; Precision Instrument Manufacturing Company v. Automotive Maintenance Machinery Company* (1945), 324 U.S. 806; *Scott Paper Co. v. Marcalus Manufacturing Company, Inc. supra; Brulotte v. Thys Company, supra; Sears, Roebuck & Co. v. Stiffel Company, supra.*

In the Superior Court and in the District Court of Appeal Lear had challenged the propriety of the Patent Office proceedings which led to the issuance of Adkins' patent, alleging that they were defective in various material respects. Among other things, Lear pointed out that new matter had been added by amendment to the application upon which the patent ultimately issued, and that fraud had been practiced on the Patent Office.

The federal patent laws expressly prohibit the introduction of new matter into the disclosure of the invention (35 U.S.C., Section 132). In condemning the

addition of such new matter this Court has pointed out that, in the absence of such a prohibition, an applicant for a patent could enlarge the scope of the patent to cover subsequently developed apparatus. *Muncie Gear Works, Inc. v. Outboard Marine & Mfg. Co., Inc.* (1941), 315 U.S. 759.

In the lower courts Lear had also alleged that fraud had been practiced on the Patent Office by the submission of incorrect oaths under 35 U.S.C., Section 115, in connection with the proceedings concerning Adkins' application [Ex. P, pp. 72, 77]. As to the issue of fraud on the Patent Office, this Court has expressly held that fraud is a defense that is available in an action to enforce a patent. *Walker Process Equipment, Inc. v. Food Machinery & Chemical Corp.* (1965), 382 U.S. 172; *Precision Instrument Manufacturing Company v. Automotive Maintenance Machinery Company* (1944), 324 U.S. 806.

The California Supreme Court, however, refused to consider these or any other challenges by Lear of the Patent Office proceedings. As to the challenge based upon the introduction of new matter, the court construed the language of the license agreement which granted a license with respect to "patented or patentable" claims (A, p. 12) to cover any patent which issued on the basis of Adkins' application. The court acknowledged the rule prohibiting the introduction of new matter by amendment, but in view of its construction of the agreement to encompass "any patent" which issued, it expressly ruled that it need not consider the question whether new matter had been added to the application by amendment (A, p. 21).

Similarly, the California Supreme Court refused to consider any evidence of fraud on the Patent Office on the ground that ". . . we are not concerned with defenses which might be available to Lear in the determination of validity and infringement." (A, p. 46).

Accordingly, the issue involved in Question Five with respect to whether any court, under the guise of interpreting a license granted under a patent application, may refuse to consider basic defects in the proceedings before the Patent Office goes far beyond any specific controversy. If this issue is not properly resolved, parties to a license agreement, or a court in construing such an agreement, could jeopardize the severe restrictions imposed by the federal patent and antitrust laws on the scope of the patent monopoly.

A further major federal issue is raised in Question Five because of the fact that, although it gave lip-service to some of them, the California Supreme Court did not apply criteria which are fundamental in the enforcement of a patent. The court thereby enlarged the scope of Adkins' patent to encompass "things" within the public domain.

Adkins' patent application describes a method, and many claims directed to method were presented during the proceedings before the Patent Office. These method claims were rejected by the Patent Office and cancelled by Adkins. Nevertheless, the court below relied upon *method* in construing the scope of the *apparatus* claims which ultimately issued (A, pp. 30-31). The state court enlarged the scope of Adkins' patent by relying upon method which was in the public domain. *McClain v. Ortmayer* (1891), 141 U.S. 419.

The trial court held that Adkins' patent could only cover the apparatus of the Michigan steel gyros by reliance on the doctrine of equivalence (A, p. 94), and held that they were not so covered. In construing the apparatus claims of the patent the California Supreme Court misapplied the doctrine of equivalence in holding that the claimed apparatus included all configurations "unless expressly excluded . . ." (A, p. 32). The court also refused to consider the apparatus claims that had been rejected and cancelled from the application merely because "the patent claims at issue had not been previously rejected" (A, p. 33) even though there had been many rejections of earlier claims, amendments and cancellation of those claims in view of the rejections.

In thus refusing to recognize any significance in the file wrapper history of the application, the court below ignored the criteria enunciated by this Court in *Schriber-Schroth Co. v. Cleveland Trust Co.* (1950), 311 U.S. 211; 218, 221 as follows:

> "Where the patentee in the course of his application in the patent office has, by amendment, cancelled or surrendered claims, those which are allowed are to be read in the light of those abandoned and an abandoned claim cannot be revived and restored to the patent by reading it by construction into the claims which are allowed . . .
>
> ". . . The patentee may not, by resort to the doctrine of equivalents, give to an allowed claim a scope which it might have had without the amendments, the cancellation of which amounts to a disclaimer."

The court also improperly enlarged the scope of the Adkins' patent by relying upon new matter added to the application by amendment [Ex. P, pp. 59-60] in construing the claims of the patent (A, p. 32) in contravention of provisions of the federal patent laws. 35 U.S.C., Section 132.

The departure by the California Supreme Court from federal criteria which for all purposes—infringement or license—govern the enforcement of a patent is a disturbing demonstration of the far-reaching extent to which the patent monopoly can be vastly and improperly extended by a state court decision. It calls for an enunciation by this Court that such criteria must be respected by all courts, whether federal or state.

CONCLUSION.

Lear is in an unenviable plight. Although the patent has been held to be invalid by the trial court as a matter of law, the California Supreme Court has precluded Lear from any challenge of the patentability or validity of the patent while a licensee and has also required cessation of manufacture of products purportedly covered by the agreement to terminate the agreement, so that Lear would have no standing in court to make such a challenge after termination. Additionally, Lear's efforts to obtain a determination of the issues of validity, infringement and enforceability in an action in a federal court have been thwarted by that court's stay of the federal action on the ground of the state court's jurisdiction to determine such issues.

At the heart of this case is the extent, if any, to which the state courts should be permitted, under theories of licensee estoppel, to preclude the challenge of patent validity or of the patentability of claims of a

patent application, or should be permitted to interpret and enforce the provisions of license agreements without reference to their impact on the proper limits of the patent monopoly and the purposes of the antitrust laws. Equally significant is the extent to which a state court may ignore criteria which, as enunciated in the patent laws and in the decisions of this Court, are basic in determining the propriety of Patent Office proceedings and the proper scope of the claims of a patent.

We urge that, by the granting of this petition for a writ of certiorari, this Court provide guidance to both the state and federal courts in these important matters.

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IN THE

Supreme Court of the United States

October Term, 1968

No. [redacted] 56

LEAR, INCORPORATED,

Petitioner,

vs.

JOHN S. ADKINS,

Respondent.

VOLUME II.

Appendix to Petition for Writ of Certiorari to the Supreme Court of [redacted] California.

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APPENDIX A.

Opinion of California Supreme Court.

In the Supreme Court of the State of California, in Bank.

John S. Adkins, Plaintiff and Appellant, v. Lear, Incorporated, Defendant and Appellant. L.A. 29204, 29205, 29206, 29027 (Consolidated Appeals).

Filed, Dec. 14, 1967.

John S. Adkins, an inventor and mechanical engineer, was engaged in the development and improvement of gyroscopes[1] for Lear, Incorporated, a manufacturer of gyroscopes and related mechanisms. Adkins brought this action against Lear, alleging in his first cause of action that prior to 1955 he had conceived certain inventions and made them available to Lear and that on September 15, 1955, he entered into a written agreement with Lear under the terms of which he granted Lear a license to use these inventions in products manufactured by it, in exchange for which Lear was to pay a stated percentage of the net sales price to Adkins as royalties on all products incorporating his inventions. It was averred that from September 10, 1957 onward, Lear had refused to pay royalties to Adkins on numerous products which it manufactured and sold and for which royalties were required to be paid under the license agreement.

The jury found in favor of Adkins and awarded him damages in the amount of $904,474.49 for the period from January 1, 1955, to May 31, 1963.[2] A portion

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[1]Hereinafter sometimes referred to as gyros.

[2]The parties stipulated that this was the period of time involved for the purpose of determining the amount of damages.

of this amount ($16,351.93) was based on a verdict directed by the trial court as to a product manufactured by Lear and designated as the 2156 gyro. A judgment on the jury's verdict was entered on May 4, 1964. Thereafter, Lear moved for judgment notwithstanding the verdict or, in the alternative, a new trial. (Code Civ. Proc., § 629.)[3] The trial court granted the motion for judgment notwithstanding the verdict, except as to the 2156 gyro, and it granted the motion for a new trial in the alternative as to all products involved in the action. Multiple appeals have been taken; that which involves the primary matters at issue between the parties, numbered L.A. 29204, will be discussed first.[4]

L.A. 29204

The license agreement contained two provisions permitting its termination by Lear, and Lear purported to exercise its right to terminate under these provisions by a letter addressed to Adkins dated April 8, 1959. Reduced to its simplest terms, the fundamental questions

[3]The alternative form of motion was abolished by amendment of section 629 before the trial of the present case commenced in 1964. (Stats. 1961, ch. 604, p. 1752.) However, the provisions of the section with respect to the review of judgments notwithstanding the verdict and orders for a new trial remained substantially the same, with the exception that the denial of a motion for judgment notwithstanding the verdict was made reviewable on appeal as a matter of right where the motion for a new trial was granted.

[4]This discussion involves: (1) Adkins' appeal from the judgment notwithstanding the verdict insofar as it was favorable to Lear and from the order granting the motion for a new trial; (2) Lear's appeal from the judgment on the directed verdict as to the 2156 gyro and from the court's denial of its motion for judgment notwithstanding the verdict as to that product; and (3) Lear's appeal from the whole of the judgment entered on May 4, 1964, on the jury's verdict in favor of Adkins.

we are called upon to decide are whether the agreement was validly terminated by Lear and (except as to the 2156 gyro) whether there is substantial evidence in support of Lear's claim that its products did not incorporate Adkins' invention. We determine that under a proper construction of the agreement Lear did not effect a valid termination and that not only is there no substantial evidence to support a determination that Lear did not use Adkins' invention in its products but that the record compels the conclusion that Lear did incorporate Adkins' invention in the instruments manufactured by it. The 2156 gyro will be discussed separately.

Before setting forth the facts, it may be helpful to summarize some fundamental principles and procedures relating to the instant case. The federal courts have exclusive jurisdiction over actions arising under patent laws. (28 U.S.C.A. § 1338) but where a plaintiff seeks to enforce a patent licensing agreement the action "is not a suit under the patent laws of the United States and cannot be maintained in a federal court as such." (Luckett v. Delpark (1926) 270 U.S. 496, 502, 510; Farmland Irrigation Co. v. Dopplmaier (1957) 48 Cal.2d 208, 217.)[5] Where such an action arises in a state court, the court may pass upon the meaning, scope, validity or infringement of the patent. (Lear, Siegler, Inc. v. Adkins (9th Cir. 1964) 330 F.2d 595, 600.)

---

[5]After the present suit was filed by Adkins but before the trial was held, Lear filed an action for declaratory relief in the United States District Court for the Southern District of California, alleging that Adkins' patent was invalid and that in any event the gyros manufactured by it did not infringe the patent. The federal court granted a stay until final adjudication of the present action. (Lear Siegler, Inc. v. Adkins (9th Cir. 1964) 330 F.2d 595.)

A patent is, of course, presumed to be valid until the presumption has been overcome by convincing evidence.[6] Ordinarily, a party will attempt to demonstrate the invalidity of a patent by showing that it has been anticipated by the prior art or that it is obvious or without utility. However, one of the oldest doctrines in the field of patent law establishes that so long as a licensee is operating under a license agreement he is estopped to deny the validity of his licensor's patent in a suit for royalties under the agreement. The theory underlying this doctrine is that a licensee should not be permitted to enjoy the benefit afforded by the agreement while simultaneously urging that the patent which forms the basis of the agreement is void. (See 4 Walker on Patents (Deller 2d ed. 1965) p. 607.) This doctrine does not prevent one who is not a licensee from challenging the patent's validity.

The license agreement in the present case was, insofar as is relevant here, based not on an existing patent issued to Adkins but on his application for a patent which the parties believed would eventuate in the issuance of a patent.

A patent application generally consists of a drawing of the invention, the specifications, and the claims.[7] The specifications are a description of the invention, the manner in which it is constructed, and the objects it is intended to achieve. They ordinarily include an introductory clause identifying the field in which the inven-

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[6]The principles of patent, law summarized here may, unless otherwise noted, be found in Toulmin, Handbook of Patents (2d ed. 1954) chs. III, IV, V.

[7]There are additional formal requirements such as the oath of the inventor; a drawing is not required in every case.

tion is made, a recitation of the advantages of the invention and the state of the prior art, a brief description of the drawings and its parts, and, in the case of a machine, the manner in which it operates.

The claims follow the specifications. The claims must point out the subject matter which the applicant regards as his invention, and they are "the real measure of the invention." The drafting of claims is a highly specialized and difficult undertaking. The practice is to include both very broad claims and claims of a more restricted type. Frequently, an applicant will state his claims as broadly as is feasible in order to obtain as wide a monopoly as he can, gradually narrowing them to precisely describe his invention as the broader claims are rejected. (See 2 Walker on Patents (Deller ed. 1937) p. 770.) The subject matter of the claims may describe a machine or apparatus designed to perform some function, sometimes called an "appartus claim," or a method or process of achieving a particular result independent of the machine which produces it, sometimes called a "method claim."

The prosecution of the application before the United States Patent Office will, except in very unusual cases, consist of at least one rejection of some or all of the claims of the application on the ground that a search has indicated they have been anticipated by prior inventions, and the subsequent amendment of the claims or specifications by the inventor. (See Seidel, What the General Practitioner Should Know About Patent Law and Practice (1956) A.L.I. p. 60.) He may then file an amendment which will alter the prior claims, cancel them, or add new claims. However, he may not enlarge the disclosure of the application as initially filed by add-

ing new matter in an amendment. (35 U.S.C.A. § 132.) The issuance of a patent necessarily means that the Patent Office did not consider the amendment to constitute new matter in violation of the patent laws, and its determination in this regard is entitled to special weight. (Helm Products v. Lake Shore Manufacturing Co. (7th Cir. 1955) 227 F.2d 677, 679.) The process of rejection and amendment continues until either allowance or final rejection of the claims. A rejection is presumably designated as final if the examiner concludes that there is little likelihood that the application can be amended in such a manner that the issuance of a patent would be justified. This procedure of rejection and amendment is so commonplace that one authority has stated that most patent attorneys view with some misgivings those rare instances in which an application is allowed without amendment because it raises the possibility that the applicant has failed to state his claims as broadly as he could have and that a still broader claim might have been allowed, defining the invention (and thus the protection afforded by the patent) in a manner broader and more advantageous to the applicant. (Seidel, *op.cit.* supra, p. 48.)

An application may not claim more than one distinct invention, and a patent may be issued for one invention only. If the examiner at the Patent Office discovers that more than one invention is disclosed by an application he will require a "division," i.e., the applicant must limit his claims in the application to only one of the inventions but may file a separate application for each of the other inventions disclosed by the original application. It also happens that, after filing an application, the inventor may discover improvements which involve

additional subject matter over the original disclosure and which cannot be added by amendment because they constitute new matter. He may then file another application, called a "continuation application" in which he may claim both the disclosure of the original application and the new improvements.

If the applicant is satisfied with the claims which have been allowed he may cancel those which have been finally rejected. If he is dissatisfied with the final rejection he may take an appeal to the Board of Appeals or, in certain limited circumstances, may attempt another amendment. (37 C.F.R. § 1.116.) At the time of the prosecution of the application involved in the present case, the average patent application had a pendency of somewhat over three years and was acted upon by the Patent Office from two to four times. (Seidel, *op.cit.* supra, p. 61.)

On December 29, 1951, Adkins and Lear entered into an agreement providing that Adkins would supervise the fabrication of vertical gyroscopes for Lear, that all new discoveries, ideas and inventions relating to such gyroscopes would become the property of Adkins, and that he would license Lear to manufacture the instruments on a mutually satisfactory royalty basis. The agreement also provided that the physical instruments fabricated would be the property of Lear.[8] A few days later, Adkins commenced employment with Lear in its Santa Monica plant and began to conduct various experiments aimed at improving the accuracy and lowering the cost of manufacturing these instruments.

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[8]The 1951 agreement was attached to and made a part of the complaint.

Gyroscopes are used in aircraft to indicate to the pilot the direction and attitude of the airplane. A vertical gyro indicates the pitch and roll of the aircraft and a directional gyro indicates the aircraft's direction. The gyro seeks to maintain its fixed position in space, and the movements of the aircraft are measured electronically by the gyro and recorded on gauges. The essential, unique element of a gyro is a rotor, a heavy disc, which, when it is electrically driven at high speed, seeks to maintain its attitude in space.

In all cases the rotor is suspended by its axis, the ends of which are mounted in a ring, known as a gimbal. On some occasions the gimbal ring is itself suspended in a second ring, in which event the rings are known as the inner and outer gimbal rings and axes. The entire structure is mounted through the outer gimbal ring in a frame fixed to the aircraft or other craft served by the gyro. Each gimbal ring is provided with two short pins or axle ends called trunnions, which project outward from the circumference of the ring directly opposite each other. They lie on a common axis and are inserted into a bearing element which, in the case of the inner gimbal, is fixed to the inner circumference of the outer gimbal ring and, in the case of the outer gimbal, to a supporting frame. There is, accordingly, one pair of bearings in the outer gimbal for the inner gimbal, and one pair of bearings in the frame for the outer gimbal. The bearings are of the ball-bearing type, each consisting of an inner and outer race or ring with a number of balls between the two rings.

Among the most important factors in achieving accuracy in a gyro is alignment on the same axis of the

pair of trunnions on the opposite sides of the gimbal, and the alignment in parallel planes of the faces of the bearing elements. Accuracy in these coaxial and parallel alignments reduces friction and the exertion of undesirable forces which cause the gyro rotor to drift from its desired stable position in space, which in turn results in inaccurate recordations. In all gyros here in issue, the bearings are fixed in place, either directly to the next outer gimbal or frame, or to intermediate bearing cups affixed to the outer gimbal or frame.

Adkins' invention and the original claims related thereto involved both a mechanism or apparatus which fixed and held each pair of bearings in coaxial and parallel alignment, as explained above, and a method by which pairs of bearings could be positioned in coaxial and parallel alignment. In subsequent amendments the method claims were eliminated. When Adkins was first employed by Lear its practice was to bore; tap and ream a pair of coaxial holes directly opposite each other on the gimbal ring or frame which supports the outer ring. The bearings were then fitted into the seats formed by these holes. In order that alignment within acceptable tolerances could be achieved by this method, precision work by skilled machinists was required and there was a high incidence of rejects.

Adkins' apparatus for alignment, in its simplest form, consists of a pair of bearing cups mounted in oppositely placed receiving holes in the gimbal by use of a mandrel. A mandrel, in this instance, is a finely tooled rod or shaft, and is used by Adkins only as an assembly tool. Its cylindrical circumference is such that a bearing cup will fit snugly over each end of the mandrel. The mandrel, with cups firmly in place, is

then inserted within the gimbal. In this instance the gimbal is not a ring but a hollow sphere which is made in two halves, capable of being joined to form the sphere. There is a receiving hole, designed to receive a bearing cup at the bell top of each half sphere. The mandrel, with cups fitted, is first inserted within a half sphere by placing a cupped end of the mandrel into the receiving hole. The other half sphere is then placed over the assembly, so that the opposite cupped end of the mandrel fits into the receiving hole in that half sphere. The mandrel is of such length that when the half spheres are joined the cups project into the receiving holes. These holes are oversize, that is, the cups do not fit snugly into the holes but are allowed to freely position themselves. When the gimbal sphere is in the assembled position, the cups are cemented into the precise position as aligned by the mandrel. As the mandrel is machined to the precise dimensions of the rotor shaft or trunnions of the inner gimbal, as the case may be, the cups will receive the shaft or trunnions in what Adkins claims to be greatly improved alignment. Moreover, aside from the mandrel, which is a reusable tool, and the inner surfaces of the cups which are machined to receive the pair of bearings, no precision machine work is required and production costs are thus substantially reduced. After the cups have been firmly fixed in place, the sphere is disassembled, the mandrel removed, the rotor or inner gimbal is installed, and the sphere reassembled.

At the same time that Adkins was engaged in developing his invention, Lear was experimenting in its Grand Rapids, Michigan, plant with a number of other devices to achieve gyro accuracy. Lear claims that it

developed the devices used in its models 2151, 2152, 2153 and 2171 independently of Adkins and that these models do not incorporate any of Adkins' inventions. Adkins disagrees. These models will hereafter be collectively referred to as the "steel gyros"[9] and will be discussed more fully in the portion of this opinion devoted to the question whether Lear utilized Adkins' invention in its products.

On February 24, 1954, Adkins filed an application for a patent in the United States Patent Office relating to his invention. It contained, *inter alia,* several claims relating to bearing alignment. Claims 7 and 8 related to a *method* of aligning bearings, and Claim 9 was denominated an alignable bearing structure for supporting an element movable with respect to another element. These claims were rejected by the Patent Office on September 8, 1954, as being fully met by a previous patent issued to one Carlson. Thereafter, on March 7, 1955, Adkins filed Amendment A to his application. This amendment canceled Claims 7 and 8 and replaced them with Claims 18 and 19, which also related to a method of bearing alignment. Three words were added to Claim 9.

This was the condition of the application when the license agreement was executed on September 15, 1955. Several years of negotiation preceded the consummation of this agreement, and the parties were represented by counsel in these negotiations.

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[9]The parties disagree as to the correct terminology applicable to this group of products. Lear claims they should have been designated as "Michigan gyros" because they were developed by it at the Michigan plant. Since the agreement refers to these models as steel gyros and this appears to be the more neutral term, we shall adopt this designation.

The license agreement expressly provided that it superseded and canceled all prior agreements between the parties, including the one executed on December 29, 1951. Adkins represented in the agreement that he was the owner of the inventions disclosed or intended to be disclosed in the application, which was attached and referred to as Exhibit B. He granted to Lear an exclusive license "under all the claims of . . . Exhibit 'B' . . . and any patents issued . . . thereon." The definition of the word "claims" was limited to those claims which were patented or patentable. Consideration in the amount of $500 was acknowledged, and it was provided further that while the licenses were in effect a stated royalty would be paid on products incorporating Adkins' inventions and that, in any event, a minimum of $500 a year would be payable as royalties.[10]

Two provisions permitted Lear to terminate the agreement. One was contained in paragraph 2(a) and provided: "Lear shall have the right on ninety days' prior written notice to Adkins, to terminate any one or more of the licenses herein granted." The other, set forth in paragraph 6 of the agreement, stated, "In the event that . . . the U. S. Patent Office refuses to issue a patent on the substantial claims of the application attached as Exhibit 'B', or if such a patent so issued is subsequently held invalid . . . Lear at its option shall have the right forthwith to terminate the specific license so affected or to terminate this entire Agreement and no further royalties shall thereupon be payable under the license so terminated or under this Agreement if Lear shall have elected to terminate this Agreement in its entirety."

[10]The agreement also provided that Lear would reimburse Adkins for $540 in patent costs already incurred by him and would pay future costs for the prosecution of the application.

On March 21, 1957, the Patent Office rejected Claims 9, 18 and 19 on the ground that they had been fully met by a patent granted to one Grenat. Before Adkins filed any amendment in an attempt to meet this objection, Lear wrote him on September 10, 1957, that it had reviewed his patent application and concluded it did not disclose any inventions utilized in any Lear equipment except the 2156 gyro and certain components thereof, that the steel gyros manufactured by it did not come within the scope of the application, and that Lear had made a search of the Patent Office files and believed the method of bearing alignment used in assembling the steel gyros was not patentable. Lear also informed Adkins that it would no longer pay royalties on the steel gyros but would continue to do so on the 2156 gyro. Adkins protested this action and on February 1, 1957, he resigned from Lear's employ because of its refusal to continue the payment of royalties on the steel gyros.

Thereafter, Adkins again amended Claims 9, 18 and 19 in an attempt to meet the objections of the Patent Office relating to the Grenat patent. These claims were also disallowed and, after another amendment of the application but before any action by the Patent Office on the amendment, Lear wrote Adkins on April 8, 1959, that it was exercising its right to terminate the license agreement under paragraphs 2(a) and 6. Royalty payments on the 2156 gyro were also discontinued. Subsequently, Adkins canceled the claims in his application going to a *method* of aligning bearings and substituted therefor a series of claims referring to an *apparatus* for support bearings.[11] These apparatus claims

[11]The history of the prosecution of the patent application
(This footnote is continued on the next page)

were allowed by the Patent Office and letters patent issued thereon on January 5, 1960. On the same date, Adkins filed the present action. Lear stipulated that it manufactured and sold the gyros in issue both before and after its letter of termination of April 8, 1959.

In summary, a history of the prosecution of Adkins' patent application, after the license agreement was executed, reveals that Lear refused to pay royalties on the steel gyros after one rejection of Adkins' claims by the Patent Office, and it notified Adkins that the agreement was terminated after a second rejection at a time when the claims still involved a method of aligning bearings.

The trial of the action occupied many weeks, and voluminous testimony was introduced by both parties. The trial court held that as a matter of law Lear had terminated the license agreement insofar as the steel gyros were concerned.[12] Adkins had urged at the trial

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shows the following: On September 23, 1957, Adkins filed Amendment B, amending Claims 9, 18 and 19, but only in minor respects, for the purpose of avoiding the bar of the Grenat patent. In a supplemental amendment before Patent Office action (Amendment C), he added Claims 22 through 27, which related to an alignable bearing structure. These claims were rejected on June 20, 1958, the first group as still not meeting the objections relating to the Grenat patent and the second as being anticipated by a patent to Sperry. On December 22, 1958, Adkins filed Amendment D, this time adding some material to the specifications, amending Claim 9, and substituting for Claims 18 and 19, claims 27 and 28, the latter two claims still relating to a method for aligning bearings. The April 8, 1959, letter of termination was sent prior to any action by the Patent Office on this amendment. A few weeks later Adkins canceled the method claims and by Amendment E substituted the apparatus claims on which he was finally granted a patent.

[12]Lear insists that Adkins conceded at the trial that the license agreement had been terminated as a matter of law. There is no merit in this contention. Lear relies on certain statements made by Adkins' attorney to the trial court in chambers and on the fact that Adkins submitted an instruction, given by the trial

that even if the agreement was terminated Lear would be liable for damages under the theory of unjust enrichment set forth in Seagren v. Smith (1944) 63 Cal.App.2d 733.[13] The court submitted to the jury for determination whether, as to the steel gyros, Adkins' patent was valid and whether Lear used the invention. The jury deliberated for eight days, and its verdict in favor of Adkins implied that it had determined both that the patent was valid and that Lear had utilized Adkins' invention in its products. Lear's motion for judgment notwithstanding the verdict and for a new trial in the alternative was based on numerous grounds, including the asserted invalidity of the patent and noncoverage.

The trial court, in granting the motion for judgment notwithstanding the verdict as to the steel gyros, wrote an opinion in which it held that Adkins' patent was invalid as a matter of law. The court analyzed Adkins' invention and the steel gyros manufactured by Lear and compared them with the prior art. The holding of invalidity was based on the ground that Adkins' de-

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court, stating that Lear had terminated the agreement by its letter of April 8, 1959. However, a reading of the record indicates that Adkins took the position early in the trial that the April 8 letter did not effect a valid termination and that it was only after the trial court had ruled as a matter of law that the agreement had been terminated that Adkins, in discussions with the trial judge, assumed this to be the case. The instruction stating that the agreement had been terminated was proposed by Adkins only as an alternative in the event the court refused to give another instruction requested by him stating that the letter of April 8, 1959, was wholly ineffective to terminate the agreement.

[13]In the *Seagren* case it was held that although a licensing agreement was canceled by the licensee, the latter was nevertheless liable for the payment of royalties thereafter upon the theory of an implied contract, based on the principle that a person shall not be permitted to enrich himself unjustly at the expense of another.

vice did not constitute an invention but was merely an aggregation of old parts and elements performing no new or different function. Although the court purported to do so, it did not decide whether Lear utilized Adkins' device.[14] The motion for new trial was granted on the grounds of irregularity of the proceedings, excessive damages, errors of law occurring at the trial, insufficiency of the evidence to justify the verdict, and that it was against the law. (See Code Civ. Proc., § 657.)

Under the doctrine of licensee estoppel, Lear would be prohibited from challenging the validity of Adkins' patent if the agreement had not been validly terminated. Where a license agreement specifies the conditions under which termination may occur, those conditions must be satisfied in order to effect a valid termination. (Thomson Spot Welder Co. v. Oldberg Mfg. Co. (Mich. 1932) 240 N.W. 93, 94; see Ellis, Patent Licenses (3d ed. 1958) pp. 365-366; 69 C.J.S. p. 785.) Here, the contract provided that it would continue in force until the patent relating to the subject matter of the agreement expired, unless sooner terminated pursuant to its provisions.[15] We must, therefore, turn our attention to

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[14]After holding Adkins patent invalid the court stated that it was desirable to dispose of the question of infringement by Lear. However, the opinion merely states that the device utilized by *Lear* in its steel gyros was not patentable and, therefore, that Adkins could not claim it as infringing his patent.

[15]Lear relies on authorities holding that a licensee may terminate a license agreement upon notice to his licensor even though, prior to termination, there has been no adjudication of invalidity of the patent which is the subject of the agreement and that thereafter the licensee may challenge the validity of the patent. (See, e.g., The Armstrong Co. v. Shell Co. of Cal. (1929) 93 Cal.App. 769, 778-779.) This rule has no application if the agreement sets forth the particular circumstances under which termination must occur. As stated above, such provisions must be complied with in order to effect a valid cancellation.

the question whether Lear effected a termination of the license agreement.

We will consider first the question whether Lear validly terminated the agreement under paragraph 6.

As we have seen, paragraph 6 provided that Lear could terminate the agreement in the event the Patent Office refused to issue a patent on the substantial claims of the application (Exhibit B).[16] The crux of Lear's argument is that Adkins was required to obtain a valid patent based on method claims and that the agreement related only to those claims set forth in the application at the time the contract was entered into, or their substantial equivalents. Lear also contends that section 6 did not require final action by the Patent Office in rejecting Adkins' application before the right to terminate arose and that it was justified in terminating the agreement on April 8, 1959, because the Patent Office had refused by its rejections of March 21, 1957, and June 20, 1958, to allow Adkins' claims relating to bearings.

The rebuttal to these contentions is contained in the provisions of the agreement, which neither party asserts is ambiguous. An examination of those provisions demonstrates Lear incorrectly asserts that the li-

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[16]This provision also permitted Lear to terminate the agreement under certain conditions subsequent to the issuance of a patent. Thus Lear was given the power to cancel the agreement if a patent which issued on the claims of the application was subsequently held invalid. Obviously, any power of termination Lear may have had under such a provision could not be exercised until after the issuance of the patent. It may be noted in this connection that it has been held under a similar provision that the licensee itself could not challenge the validity of the patent in a suit for royalties under the agreement. (United States v. Harvey Steel Co. (1905) 196 U.S. 310, 316.)

cense which was the subject of the agreement related *solely* to method claims contained in the application at the time the agreement was executed. Indeed, the parties could hardly have defined the scope of the license in a broader manner. It was to cover not only patented or patentable claims disclosed or intended to be disclosed by the application attached as Exhibit B to the agreement but also such claims in other applications filed for different but related inventions revealed by the exhibit.

Nowhere in the agreement was there a restriction as to the type of claims (i.e., apparatus or method claims) to which the license was to apply, nor any implication that the coverage of the agreement was to be restricted to claims in the application at the time of the agreement. Under section 2(a) Adkins granted to Lear an exclusive license under all the patented or patentable claims of Exhibit B and "any patents hereafter issued thereon" to manufacture and sell products containing his inventions. The term "claims" was defined as those claims which were patented or patentable. Paragraph 3(a) provided that royalties were to be paid on products incorporating Adkins' "inventions" and that term was defined (par. 1(d)) as "all claims . . . disclosed or intended to be disclosed" in Exhibit B "but only to the extent that such claims . . . are patented or patentable" by Adkins.[17]

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[17]Lear states that the license extended only to *validly* patented claims. However, the provisions of the agreement setting forth the scope of the license do not so state. The validity of the patent was adverted to in the agreement only in connection with the right to terminate if the patent "was subsequently held invalid." As pointed out in footnote 16, *ante*, the quoted words constitute a condition subsequent which could not be exercised by Lear until after a patent had been issued.

Thus it appears that Adkins granted Lear a license on all patented or patentable claims of Exhibit B and the claims of any patents issuing thereon, and Lear agreed to pay royalties on all products incorporating patented or patentable inventions disclosed or intended to be disclosed by Exhibit B, which is defined in paragraph 1(b) as follows: "The phrase Exhibit 'B' as used in this Agreement shall be deemed to refer to and include the application for United States Letters Patent filed on February 15, 1954, attached hereto, and all continuations and divisions thereof, and all patents issued or issuing thereon to Adkins with respect to the inventions disclosed or intended to be disclosed therein and all improvements thereof, and all renewals, extensions, reissues of any patents issued pursuant thereto."

It clearly appears from the provisions quoted above that the parties intended to license not only those claims eventuating in a patent which were set forth in the application at the time of the agreement, but also any claims intended to be disclosed in the application, without any restriction as to the type of claims allowed.[18] The license extended even to related inventions disclosed by the application or improvements of a disclosed invention for which a divisional or continuation application would be required and which would eventuate in a patent. Lear's obligation to pay royalties was, of course, based on the use of such inventions in its products.

The unimportance of particular application claims at the time the agreement was consummated is indicated

[18]As noted above, Adkins could not, under the patent laws, amend his application to substitute claims describing an invention entirely different from that described in the original application.

by the fact that Exhibit B did not constitute a copy of the application as it then existed in the Patent Office but contained claims which, with the knowledge of both parties, had already been rejected. The application was, as we have seen, filed on February 15, 1954, and the claims going to a method of bearing alignment as well as Claim 9 had been rejected on September 8, 1954. Amendment A, also relating to a method of bearing alignment, was filed on March 7, 1955. Both parties were aware of this but nevertheless Exhibit B did not include Amendment A and indicated the claims in the form in which they had appeared in the original application.

Lear knew that the method claims in the original application had been rejected prior to the execution of the license agreement, yet the terms of the contract not only failed to restrict the license to method claims or to claims in the application at the time the contract was signed but defined the scope of the license in an extremely broad manner. Under these circumstances, Lear's contention that it bargained only for a license of claims relating to a method of aligning bearings cannot be sustained.

Moreover, there is nothing in the contract to indicate that Lear could unilaterally anticipate Patent Office action and determine, prior to final action by that agency, that Adkins could not obtain a patent on the invention disclosed or intended to be disclosed by the application. Section 6 provided that Lear could terminate the agreement in the event the Patent Office *refused* to issue a patent on the substantial claims of Exhibit B. There was no way to determine in advance of final action whether a refusal would eventuate or whether

Adkins would receive a patent. Neither of the rejections of the Patent Office prior to Lear's termination of the agreement were denominated final rejections. Lear had the advice of counsel experienced in patent matters in negotiating the agreement, and it must have known that the prosecution of an application consists of the rejection and amendment of the claims of the application and that this procedure is time-consuming. Nevertheless, it unilaterally determined after the first rejection of the claims subsequent to the agreement that it would no longer pay royalties on the steel gyros and, after a second rejection, it terminated the agreement altogether on the ground, *inter alia*, that the Patent Office had refused to issue a patent on the substantial claims of the application. There is not the slightest indication in the agreement that the parties were concerned with intermediate actions of the Patent Office in rejecting particular types of claims, and it cannot be said that there was a refusal to grant a patent as to the claims of Exhibit B, as defined in the agreement, on the basis of these intermediate rulings.[19]

Lear relies on Marvin v. Mills Alloys, Inc. (1939) 31 Cal.App.2d 549, in support of its contention that it could unilaterally determine prior to final Patent Office action that Adkins would not obtain a patent. There,

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[19]Another contention made by Lear is that Adkins improperly added new matter to his application in an amendment to the specifications filed on December 22, 1958. It is argued that by this amendment Adkins changed his invention to something entirely different than was contemplated by the parties when they entered into the license agreement. In view of the conclusion reached above, that the parties intended to license any patent which issued on the basis of Adkins' application (subject to certain conditions subsequent to the issuance of the patent giving Lear the right to effect a termination), we need not discuss the substance of this contention in reaching a conclusion on the issue of termination.

the agreement provided that the plaintiff granted to the defendant a license to use a described invention. The invention was a one-element device which the agreement stated had been manufactured by the defendant previously. It was also provided that the plaintiff would file an application for a patent on that device and that if he was finally unsuccessful in obtaining a patent for it, royalty payments would cease. The plaintiff filed an application in accordance with the agreement, but the application was denied on the ground that patents had been obtained on the same invention by another. The defendant refused to pay further royalties. Thereafter, the plaintiff obtained a patent for a three-element invention, which included the single-element device the defendant was manufacturing. It does not appear whether the application upon which the patent was issued was the same one as originally filed.

The court held that the three-element device of the patent was different from the device manufactured by the defendant, that the plaintiff was unable to secure a patent on his original invention, which was the subject matter of the agreement, and that, therefore, the defendant was not liable for payment of royalties for manufacturing the original invention.

The differences between *Marvin* and the instant case are obvious. The question decided there was whether the plaintiff obtained a patent on the same device as was specifically referred to in the agreement. Here, the agreement related to any patented or patentable invention disclosed or intended to be disclosed by the claims of the application, not to a particular device described. There is dictum in *Marvin,* not necessary to the decision, that when the Patent Office denied

the plaintiff's application "no patent could be obtained by him except upon a different invention." In view of the normal procedures followed in patent applications, we disapprove this language insofar as it implies that a single rejection of an application by the Patent Office constitutes a final determination that no patent may be issued on an invention disclosed in an application.

The next question to be determined is whether the license agreement was validly terminated under paragraph 2(a).

Lear had the right, under paragraph 2(a) to cancel the license upon 90 days' written notice to Adkins. Lear maintains that this provision granted it an absolute right to cancel the agreement at any time without discontinuing the use of Adkins' invention, while Adkins asserts that when the license agreement is viewed as a whole it shows that Lear could not exercise its right to terminate unless it also stopped utilizing his invention.

Lear urges that we should not require the cessation of manufacture as a condition precedent to 2(a) termination because another provision of the agreement (paragraph 3(g)) indicates that the parties had cessation of manufacturing in mind when they entered into the agreement, and if they expressed such a condition precedent as to one contingency they would have, if they so intended, expressed it as a condition to 2(a) termination as well. Paragraph 3(g) provided that Lear must pay Adkins minimum royalties of $500 a year from January 1, 1957 onward so long as the license was still in effect (e.g., whether or not Lear used

Adkins' invention) and that if Lear failed to pay minimum royalties Adkins could cancel the agreement and thereafter Lear would be prohibited from using the invention. A number of cases are cited in support of Lear's argument and, while their holdings favor Lear, they make clear that the ultimate consideration in determining whether to imply a covenant in an agreement is the intention of the parties as shown by the contract construed as a whole.[20]

A covenant may be implied where it is indispensable to effectuate the intention of the parties, where it is clear from the language used that the provision was so clearly within their contemplation that the parties deemed it unnecessary to express it, where it would have been inserted into the contract if attention had been called to it, and where the subject is not completely covered by the contract. (Lippman v. Sears, Roebuck & Co. (1955) 44 Cal.2d 136, 142.) There seems little doubt that when the contract here in issue is viewed as a whole, it shows an intention that Lear would discontinue the manufacture of products using

[20]In County of Alameda v. Southern Pac. Co. (1961) 55 Cal.2d 479, 488, it was held that where a contract set forth two particulars in which one party would indemnify another for negligence, when the contract was construed as a whole it was reasonable to conclude that they would have made express provision for indemnification under a third set of circumstances, if they had so intended. In Stimpson Computing Scale Co. v. W. F. Stimpson Co. (1900) 104 F. 893, a license agreement under an issued patent provided that the licensee could terminate the contract on six months' notice in writing of its intention to discontinue manufacturing a device "under this contract." The court held that when all the language of the agreement was considered, the effect of the provision was only that manufacture after notice of termination must cease under the terms of the contract but that there was nothing to indicate that the manufacturer intended to stop utilizing the invention apart from the contract. After termination, it was stated, the manufacturer might be subject to an action for infringement of the patent.

Adkins' invention if it terminated the agreement under paragraph 2(a). One indication of such an intention is that the termination provision of paragraph 6, under which Lear could terminate in the event the Patent Office refused to issue a patent on the substantial claims of the application, would be almost wholly redundant if Lear could, for any reason or no reason, exercise a right of termination under paragraph 2(a) and still continue to use Adkins' invention.

Another indication of the intention of the parties is provided by a comparison of two provisions of the agreement permitting Adkins to terminate in the event Lear defaulted in its payment of royalties. Under paragraph 3(g), as set forth above, Adkins could terminate the agreement if Lear failed to pay $500 in minimum royalties yearly, and thereafter Lear could no longer manufacture products containing Adkins' inventions. Paragraph 10(a) gave Adkins the right to terminate the agreement in the event Lear defaulted in the payment of *earned* royalties. However, this provision did not state that Lear would thenceforth be prohibited from manufacturing products incorporating Adkins' invention. It would be absurd to assume that the parties intended that Adkins could require Lear to stop using his invention if Lear failed to pay royalties of $500 a year but if Lear defaulted in its payment of earned royalties in a very much larger amount, Adkins could terminate the agreement under paragraph 10(a) and nevertheless Lear could continue to use his invention. It seems evident that the parties did not expressly state in some provisions the requirement that Lear discontinue manufacturing products utilizing Adkins' invention in the event of termination, although they so intended.

Also persuasive are the provisions of two agreements entered into between Adkins and Lear on September 15, 1955, the same date as the license agreement. These agreements, relied upon by Lear in its answer as the basis of an affirmative defense, provided that Adkins released Lear from any claims he might have against Lear prior to September 15, 1955, including claims arising out of the agreement of December 29, 1951, *except* that he retained those rights which were secured to him by the simultaneously executed license agreement. Aside from the rights set forth in the license agreement, all inventions of Adkins prior to and after September 15, 1955, were to belong to Lear.[21]

When viewed in the light of these contemporaneous agreements, Lear's insistence that it could exercise paragraph 2(a) termination and still continue to use Adkins' invention amounts to an assertion that the parties intended by the license agreement to grant to Lear Adkins' right in the invention which was the subject of that agreement for the $500 recited as consideration for its execution.[22] That is, acceptance of Lear's contention would mean that although it was clearly under-

[21]There is confusion in the record regarding these two agreements. They were attached as exhibits to Lear's second amended answer and their relevant portions were set forth in the answer as the substance of affirmative defenses to all the causes of action. There is no question of their due execution. However, when they were offered in evidence at the trial, the court excluded them as irrelevant to the first cause of action. Nevertheless, both parties rely on them in their arguments. Lear contends that these contemporaneous contracts are integrated into the license agreement and that by virtue of the release agreement Adkins expressly contracted away all rights to any inventions except as set forth in the license agreement.

[22]The provision setting forth the consideration itself negates such a construction since it states that the $500 is paid in consideration of the "foregoing" and "the covenants and conditions hereinafter contained."

stood prior to September 15, 1955, that Adkins' inventions conceived in his employment would be his own property, Lear could, the day after the license agreement was signed, simply by giving notice of termination under paragraph 2(a), extinguish Adkins' right in the invention covered by the license agreement because the simultaneously executed contracts released all of Adkins' other rights against Lear arising out of his employment. We cannot construe the license agreement in a manner so manifestly alien to its entire purpose.

Adkins argues persuasively that the purpose of paragraph 2(a) was to permit Lear to avoid the payment of minimum royalties in the event it no longer wished to use his invention. Under paragraph 3(g) such royalties were payable while the license was in effect, whether or not Lear used the invention, and if there had not been some provision permitting termination of the license by Lear in the event of nonuse, it would have been liable for the payment of minimum royalties throughout the 17-year life of any patent subsequently issued.

We comment on one other matter briefly before concluding the discussion of the license agreement. Lear placed in evidence a letter from one of its employees, stating that he believed he had introduced cemented-in bearing cups using a mandrel procedure in 1953, which was a year before Adkins filed his application for a patent. The device of cemented-in bearing cups using a mandrel procedure constitutes the essence of Adkins' invention, as described in his application. Lear's contention amounts to no more than a claim that it entered into a bad bargain when it signed the license agreement.

Since we have concluded that the license agreement was not properly terminated by Lear, it follows that Lear has been in breach of the contract since September 10, 1957, the date on which it ceased to pay royalties to Adkins on the steel gyros.[23] It follows also that the doctrine of licensee estoppel is applicable and Lear is foreclosed from challenging the validity of Adkins' patent. The trial court thus erred in granting Lear's motion for judgment notwithstanding the verdict as to the steel gyros on the ground that Adkins' patent is invalid. As set forth above, the court also granted a new trial in the alternative on several grounds, including insufficiency of the evidence.

One of the major bases of Lear's motion for a new trial was the assertion that the evidence was insufficient to support the jury's implied determination that Lear incorporated Adkins' invention in its products. The agreement clearly sets forth that royalties are to be paid only for patented or patentable claims which Lear utilized in its products. We are therefore presented with the second major issue in this case, i.e., whether there is any substantial evidence to support the trial court's conclusion, implicit in its order granting the new trial, that the steel gyros do not incorporate Adkins' invention as defined in the claims of the patent. (See Richardson v. Ham (1955) 44 Cal.2d 772, 775.) We conclude, for the reasons hereinafter stated, that the

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[23]This conclusion is, of course, subject to our determination regarding the question of whether Lear used Adkins' invention. That is, Lear's termination under paragraph 2(a) is valid if it refrained from using Adkins' device. Since, as we have seen, Lear has stipulated that it continued to manufacture the steel gyros both before and after the termination letter of April 8, 1959, the question of termination is inextricably bound up in the issue of whether the instruments manufactured by Lear incorporated Adkins' invention.

evidence establishes that Lear used Adkins' invention in its steel gyros and that there is no substantial evidence to the contrary.

In determining the question before us we must ascertain what it is that Adkins invented. The resolution of this issue requires that the claims of the patent be construed, and this is a question of law for the court. (Rogers v. Hensley (1961) 194 Cal.App.2d 486, 491; see 4 Walker on Patents (Deller 2d ed. 1965) pp. 66-67.) Although the present action is not for infringement of a patent but rather one for the recovery of royalties under a license agreement, the test whether the products manufactured and sold by the licensee come within the coverage of the patent is the same as that employed in a patent infringement suit. (American Photocopy Eq. Co. v. Ampto, Inc. (N.J. 1964) 198 A.2d 469, 475.)

Claims must be construed in the light of the specifications and drawings of the patent and the file history of the patent's prosecution. Claims which have been allowed cannot, under the doctrine of file-wrapper estoppel, be held to cover what has previously been eliminated from the patent application in order to avoid a rejection. (Oregon Saw Chain Corp. v. McCulloch Motors Corp. (9th Cir. 1963) 323 F.2d 758, 762, 768; Moon v. Cabot Shops, Inc. (9th Cir. 1959) 270 F.2d 539, 543.) A third rule applicable to the construction of the claims of a patent is that an accused infringer may cite the prior art to construe and narrow the claims of the patent, and if he is successful in demonstrating that he has built his device solely according to the teachings of the prior art, the mere fact that the device constructed reads upon the claims of the patent assertedly infringed does not render him liable. (Westinghouse Co.

v. Formica Co. (1924) 266 U.S. 342, 351; Casco Products Corporation v. Sinko Tool & Mfg. Co. (7th Cir. 1940) 116 F.2d 119, 121.)

Adkins contended at the trial that the four steel gyros were covered by the literal language of the claims as well as under the doctrine of equivalents. Under this principle if two devices do the same work in substantially the same way and accomplish substantially the same result, they are the same, even though they differ in name, form or shape. (Graver Mfg. Co. v. Linde Co. (1950) 339 U.S. 605, 608.) The issue of infringement is a question of fact for the jury unless there is no substantial conflict in the evidence. (See 69 C.J.S. 1016.)

It is manifest from the most cursory examination of the record that the steel gyros, like Adkins' patent, utilize a pair of bearing cups which are positioned with use of a mandrel into oppositely placed receiving holes in a frame or gimbal, and cemented into place. The 2156 gyro, to be discussed later, like the illustration of the Adkins' patent application, utilizes spherical bearing cups which rest within conical receiving holes. The steel gyros, however, utilize pairs of elements having a different configuration. The receiving holes are cylindrical in shape and the bearing cups consist of cylindrical discs which fit within the receiving holes but because of an oversized flange at the open end of the cup, cannot be inserted entirely within the hole. It is held in place not only by cement between the cylindrical surfaces within the hole, but also by cement between the flanged surface and shoulder of the hole. Our problem, basically, is to determine whether such an apparatus "infringes" the appratus described in Adkins' patent.

The file wrapper of Adkins' patent application shows approval and issuance of Claims 9 through 16, not to be confused with earlier claims, some of which bore the same numbers. These are all apparatus claims and differed basically from prior claims in that they related to a *pair* of bearing structures for the first time. Claim 9, which is the principal claim upon which the other allowed claims depend, states: "An apparatus for supporting bearings in aligned relationship which comprises a pair of bearing-receiving elements each providing means to removably support a bearing in a fixed relationship with said element, each of said bearing-receiving elements having a mounting surface by which it may be supported, means for supporting said bearing receiving elements at opposed relatively spaced positions, said supporting means providing supporting surfaces generally corresponding to said mounting surfaces and permitting said elements to be initially adjustably shifted relative to said supporting means into oriented positions where said bearing-supported means are in alignment with each other, and means to retain said bearing-receiving elements in said oriented positions to permit pairs of bearings to be interchangeably mounted in aligned relationship supported by said bearing supporting means." One of the stated objects of the invention is ". . . to provide a novel method of aligning the various bearings in the gimbal mountings, whereby exact coaxial alignment and parallelism between opposed bearings may be achieved."

The receiving holes in the gimbal are illustrated in the drawing submitted with the application as being conical in shape, and the outer contours of the bearing cups as being spherical. In this connection it is stated in the specifications: "The engaging spherical and coni-

cal surfaces permit the bearing race axis to be oriented in any direction during the adjusting period whereby coaxial alignment and parallelism of the bearing races may be easily effected. Other surfaces capable of being aligned and fixed in position such as a sphere in sphere, knife edges or other devices may be used without coming outside the scope of this invention. . . ."

The specifications also provide as follows: "While the use of mating conical and spherical surfaces has been mentioned, it is apparent that other similarly cooperating surfaces can be used. For example, a spherical surface can be used within another spherical surface, and other combinations can be employed. . . . Further, not only may the confronting surfaces . . be of any desired configuration, my invention also is not limited to the alignment of bearings of a gyroscope. . . . Modifications employing the principles of the present invention will occur to those skilled in the art. While a preferred form has been shown and described, it is to be understood that the invention is not to be restricted to the particular form and arrangement of parts herein described and shown, except as limited by the following claims."

It is obvious that the literal language of Claim 9 and the specifications, which expressly make provision for "other surfaces capable of being aligned and fixed in position", "other similarly cooperating surfaces", and "confronting surfaces . . . of any desired configuration", intend to cover within the scope of the invention receiving holes and bearing cups having mating surfaces of any configuration which will permit the angular adjustment of the bearing cups to a common axis, unless expressly excluded by other specific language.

We are unable to discern any specific or inferential language of exclusion of the configurations utilized in the steel gyros. The language of the claim itself requires only that the two surfaces "generally correspond." We cannot infer therein any intent to limit such correspondence to the precise configuration of a spherical bearing cup and a conical receiving hole, any more than to a cylindrical hole and a cylindrical disc which partially rests within the hole, supported by a flanged part of the disc. Moreover, the specifications do not purport to limit the configurations to any one or more combinations of shapes, but instead contemplate all configurations which reasonably might perform the described function. (See Reiner v. I. Leon Co. (1960) 285 F.2d 501, 504; Filtex Corp. v. Amen Atiyeh (1954) 216 F.2d 443, 446-447; Chicago Pneumatic Tool Co. v. Hughes Tool Co. (1938) 97 F.2d 945, 946-947.)

Relying on the doctrine of file-wrapper estoppel, Lear claims that Adkins is estopped to assert that the allowed claims cover the particular application of the bearing cup and receiving holes utilized in the steel gyros. The record does not support Lear. As stated, Claim 9 allows for bearing cups and receiving holes having mating surfaces of any configuration permitting angular adjustment. Here the accused apparatus falls within the literal language of the claim, thus determining the issue of coverage.[24] (Graver Mfg. Co. v. Linde Co. (1950) supra, 339 U.S. 605, 607.) Moreover, there is no basis for an estoppel because the particular claims at issue had not been previously rejected

[24]As we shall see, it cannot be said in the present case that the device used in the steel gyros was built entirely according to the prior art.

and thus had not been limited by Adkins as the result of a prior rejection, and this is also true with respect to the configurations claimed by Lear to differentiate its steel gyros from Adkins' patent.

Lear's further claim that Adkins' patent describes an apparatus "different from the invention contemplated by the parties and set forth in the patent application at the time of the execution of the license agreement," is not borne out by the file wrapper. Consistent with the application developments heretofore noted, the patented apparatus falls within the scope of the initial application and, because Lear has adapted it to its steel gyros, we must conclude that the patented apparatus was within the contemplation of the parties.

It is also argued that because the spherical cups come to rest in the conical receiving holes and, while thus bearing on the conical surfaces, are cemented into permanent place, Adkins' patent is limited to those configurations which provide for contact or ball joint action between the elements.[25] There is nothing which supports this contention. Although such contact would normally be made, the scheme of the patent does not require it and the apparatus would be functional with or without contact while the elements were adjusted and cemented into position. Conversely, the elements used in the steel gyros, although normally not in contact, would nevertheless be functional although contact was made. The question of contact, accordingly, is not material to the issues.

There is likewise no merit to the assertion that the steel gyros do not infringe upon Adkins' invention for

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[25]In the steel gyros, cement may be interposed between all parts of the bearing surfaces.

the reason that alignment may be accomplished in the steel gyros by the lateral movement[26] of the bearing cups, whereas Adkins' invention does not provide for such movement. Although it is possible that lateral adjustment may accomplish some other desirable function or adjustment in the steel gyros, the alignment of the bearing cups in either the Adkins or steel gyros can be accomplished only by the angular displacement of the two cups to the same axis; that is, the axis of the mandrel, with or without lateral movement of the bearing cups. The added feature of lateral movement in the steel gyros, if it can be deemed as such, does not operate to negate an infringement of the Adkins patent if the steel gyros incorporate any claim set out in the patent. (See Temco Co. v. Apco Co. (1928) 275 U.S. 319, 328.)

Even if the literal language of Claim 9 did not cover the adaptation utilized in the steel gyros, the doctrine of equivalents would require that we conclude that Lear utilized Adkins' invention. Here the steel gyros contain the same elements, although perhaps different in size, form and shape, as in the Adkins patent, and they accomplish substantially the same function in substantially the same way. As the Supreme Court said in Graver Mfg. Co. v. Linde Co. (1950) supra, 339 U.S. 605, at pages 607-608, "One who seeks to pirate an invention, like one who seeks to pirate a copyrighted book or play, may be expected to introduce minor variations to conceal and shelter the piracy. Outright and forthright duplication is a dull and very rare type of infringement. To prohibit no other would place the inventor at

[26]"Lateral movement" in these circumstances, sometimes referred to as "radial movement," is movement in a direction 90 degrees displaced from the coaxis of the bearing cups.

the mercy of verbalism and would be subordinating substance to form. It would deprive him of the benefit of his invention and would foster concealment rather than disclosure of inventions, which is one of the primary purposes of the patent system. The doctrine of equivalents evolved in response to this experience. The essence of the doctrine is that one may not practice a fraud on a patent."

It remains to be seen whether the steel gyros, although falling within the claims of Adkins' patent, nevertheless can be shown to rely solely on the teachings of the prior art, and thus permit Lear to escape any liability to Adkins. As stated above, we are required to examine the prior art not only to determine the scope of Adkins' invention but also to determine whether what is being built by Lear springs entirely therefrom. (See Casco Products Corporation v. Sinko Tool & Mfg. Co. (1940) supra, 116 F.2d 119, 121.)

Lear claims that "if defendant's devices, when compared with the teachings and disclosure of the prior art as construed by the court, accomplish substantially the same thing, and perform substantially the same result, in substantially the same way by substantially the same means as do the prior art patents then as a matter of law, defendant's products cannot infringe plaintiff's later-issued patent. Further, even if every detail of defendant's device is not completely taught by such prior art, but if it would require only ordinary mechanical skill to come up with defendant's devices in view of such prior art, then again defendant's devices as a matter of law, cannot infringe plaintiff's patent or incorporate a patentable invention of plaintiff." The trial court concluded that the prior art did, in fact, anticipate the steel gyros. It and Lear rely on the prior Schwan and Moody patents.

The Schwan patent discloses a device for aligning the rotor of a motor. It provides for a bearing, a bearing cup, and a means of fixing the cup to the frame of the motor. In these respects it is similar to the Adkins' patent. However, Schwan does not provide for angular tilt of the bearing cups, but rather for alignment of the bearings solely by the lateral movement of the cups. Parallelism is achieved in Schwan solely by the built-in parallelism of the surfaces to which the bearing cups are attached, whereas Adkins teaches that parallelism as well as coaxial alignment is to be achieved through the relative angular displacement of the bearing cups. Clearly, Schwan does not provide for the same kind or degree of cooperative relationship between the elements as Adkins, and does not accomplish the same results. *Lear utilizes the Adkins distinctions and relies on the* Adkins results.

In the Moody patent, bearings and bearing cups are fitted onto a shaft of a rotor and mounted by means of a press fit into a frame. The press fit is loose enough to permit the bearings to assume the alignment of the shaft when tapped with a hammer. Unlike Adkins, Moody does not provide for a prealignment of the bearings prior to the mounting of the shaft, does not permanently fix the bearing cups in position, and does not allow for removal and replacement of the bearings without realignment thereafter. Again, Lear's devices utilize all those distinctions by which Adkins' invention differs from that of Moody.

Other patents were urged by Lear as constituting prior art on which both Adkins and Lear relied. Thus, in Grenat, parallel and coaxial alignment is initially achieved, but bearing cups are not utilized, and bear-

ings cannot be interchanged without disturbing the alignment. In Sperry, Carlson, and Herr, a "universally mounted" bearing is utilized which constantly adjusts itself to maintain alignment while in operation. It thus does not provide fixed coaxial and parallel alignment.

In no respect was the prior art demonstrated to provide, by individual patent or collectively, a means of permanently fixing a pair of replaceable bearings on coaxial and parallel alignment.[27] We cannot say, as urged by Lear, that the prior art disclosed a means by which it could accomplish substantially the same result, in substantially the same way by substantially the same means as does the Adkins patent. Nor can we say that by the application of ordinary mechanical skills to the prior art, the same result may be accomplished. The prior art fails to anticipate the Adkins patent, or the utilization made thereof by Lear. Although the basic elements of the patent—bearing cups, and a means of attaching the cups—have heretofore been utilized in cooperation with each other, Adkins nevertheless makes a significant step forward in the innovation and utilization of the cooperative relationship by which he employs these elements. (See Bates v. Cole (1878) 98 U.S. 31, 48; International Manufacturing Co. v. Landon, Inc. (1964) 336 F.2d 723, 726.) In *Bates,* supra, at page 48 of 98 U.S., the United States Supreme Court pointed out that where the thing patented consists of a combination of old elements, incapable of division or separate use, the alleged infringer cannot escape liability by showing that separate parts of the entire inven-

[27]A Lear witness testified that the interchangeability of bearings without total realignment of parts "is the key to the whole gyro design."

tion are found in various prior patents because such evidence does not warrant the conclusion that the plaintiff is not the original inventor of the patented improvement asserted to be infringed.

We conclude that the record demonstrates, without substantial conflict, that Lear utilized the apparatus patented by Adkins throughout the period in question. This conclusion is significantly supported by Lear's admission, hereinafter considered, that the 2156 gyro infringes the Adkins patent. The record shows that the 2156 gyro differs from the steel gyros only by the configuration of the mating surfaces of the bearing and receiving holes. Accordingly, the order granting the motion for a new trial cannot be affirmed on the ground of insufficiency of the evidence. Indeed, when the claims of the patent are interpreted in the manner set forth above, the conclusion that Lear utilized Adkins' invention in its steel gyros is compelled by the record.

The motion for a new trial was also granted on the ground that the jury awarded excessive damages under the influence of passion or prejudice. A witness for Adkins testified that the royalties due under the provisions of the contract were $904,474.49, which was the exact amount awarded by the jury. This figure was based upon data supplied by Lear as to sales of products assertedly incorporating Adkins' invention, as well as upon Adkins' views as to which products were royalty-bearing. Adkins' contention, which the jury accepted, was that under the agreement Lear was required to pay royalties not only upon the gyros which utilized his apparatus but also upon certain other components and accessories manufactured by Lear for use with the gyros. Lear's sole basis for a new trial on the question

of damages was that the jury improperly included in the damages awarded, royalties resulting from the sale of components and accessories independent of the gyro itself. The determination of this question depends upon the construction of the words "gyro system" as used in the agreement. If this term is construed in the manner asserted by Adkins, the damages awarded by the jury are correct as a matter of law.

The agreement provided that royalties were to be paid on all gyro assemblies and all gyro systems embodying Adkins' invention. These terms were defined in the agreement as set forth in the footnote.[28] For our purposes a "gyro assembly" is the gyro itself, and a "gyro system" consists of the assembly together with other components and accessories. There is no dispute with respect to gyro assemblies—the parties agree that the whole of any assembly embodying Adkins' invention is subject to a royalty. The dispute relates to whether particular components and accessories are to be included within a system, and thus to be subject to the royalty. In determining whether a particular component or accessory constitutes a part of a gyro system and thus is royalty-bearing, it was provided that the test would be whether removal of that particular item

[28]Paragraph 1(e) of the agreement provided: "The term 'gyro assembly' as used herein is defined as the cased instrument which intimately contains the gyro structure and other appurtenances necessary for proper operation of the gyro structure, all of which are included within the gyro assembly case."

Paragraph 1(f) provided: "The term 'gyro system' as used herein is defined as the 'gyro assembly' and components or accessories necessary to produce earth and/or aircraft gyro signals for use by other equipment such as indicators, autopilots, bombing systems, fire control systems, etc., which such other equipment such as indicators, autopilots, bombing systems, fire control systems, so using the gyro system signals shall not be considered as part of the gyro system."

from the system affected the accuracy of the signal which the system delivered to indicators, recorders or other consumers of the output signal. If accuracy was affected, the accessory or component was deemed to be a part of the gyro system. The parties referred to this as the "accuracy affecting test."

In answer to interrogatories and by stipulation, Lear admitted that a large number of components and accessories manufactured by it and incorporated into its systems met this test. The uncontradicted evidence established that other products, not included in the admissions, also met this test.

Lear argues that the accessories claimed by Adkins to meet the accuracy-affecting test and, therefore, to be royalty-bearing do not meet these qualifications. This contention is based upon the testimony of an employee of Lear that although Lear had admitted that the products designated in the interrogatories in question were accuracy-affecting, these admissions were based upon the definition of the term "gyro system" as generally used in the industry. He went on to state that this term, *as used in the agreement,* had a much more restricted meaning and that when viewed in the light of this limited definition the accessories designated in the interrogatories were not accuracy-affecting. His views in this respect were based upon the language of the agreement itself.[29] Adkins testified

[29]In essence, he testified that a "gyro system," as used in the agreement, meant only a gyro itself in its case and that if the broader definition of that term current in the industry were adopted, the accessories and components asserted by Adkins to be accuracy-affecting would be included in the term "gyro system." He referred not only to the direct definition of the words in issue as quoted in footnote 28, *ante,* but also to various examples given in the agreement of the items to be included in computing net sales price on which royalties were to be based.

that the meaning of the words in issue was the same in the agreement as in the industry and included the components and accessories in issue.[30] The trial court agreed with Adkins' construction of the agreement and instructed the jury that Lear had admitted that specified products were accuracy-affecting.

Since the issue concerns the interpretation of a provision in a contract which neither party asserts to be ambiguous, the construction of the words in issue is a question of law for the court. (Estate of Platt (1942) 21 Cal.2d 343, 352.)[31]

In paragraph 1, subdivision (g), the agreement provides: "In determining whether any particular component or accessory constitutes a part of the gyro assembly or gyro system, the test shall be to ascertain whether removal of the particular component or accessory affects the accuracy of the gyro assembly or gyro system signals. If removal does affect the accuracy of the gyro assembly or gyro system signal, the component or accessory removed shall be deemed a part of

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[30]Lear also argues that the parties themselves interpreted the royalty base to be only the gyros and not the other components and accessories. In support of this claim Lear points to the fact that prior to the purported termination of the agreement Adkins had accepted royalties on only the gyro itself in the model 1005 assembly. However, it is uncontradicted that Adkins did not know at the time he accepted these royalties what instruments the 1005 assembly consisted of. He could not, therefore, be viewed as having waived any rights he may have had in this regard.

[31]*Platt* holds that an appellate court is not bound by a construction of a contract based solely upon the terms of a written instrument without the aid of evidence, since there is no issue of fact to be determined. Here, both sides agreed that the words "gyro system" as used in the industry would include the components and accessories in issue, and the conflict related only to the interpretation of that term as used in the agreement itself. Thus, no factual issues are presented. (See also Civ. Code, § 1645.)

the gyro assembly or the gyro system, but if removal does not affect the accuracy of such signal, then it shall not be deemed a part of the gyro assembly or gyro system."

It is immediately manifest that whatever Lear's admissions in the interrogatories and stipulations, and whatever the industry's definition of a gyro system, all components or accessories which affect the accuracy of the signal delivered to a consumer unit itself, are intended as a part of the royalty-bearing system under the agreement.[32] We are satisfied that the components and accessories here under discussion, which are limited to units which amplify, control and adapt the gyro signal so that it may be utilized by consumer units, all affect the quality or accuracy of the signal. Lear's witness did not seem to dispute the fact that such components and accessories are accuracy-affecting and generally are properly a part of a "gyro system" as contemplated by the industry but appeared to contend instead that the parties hereto did not contemplate such a "gyro system." As indicated, we are not bound by his construction of the unambiguous language of the license agreement, and no basis appears for excluding the componenets and accessories in question in determining royalties.

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[32]It is also apparent from paragraph 3, subdivision (d), that the parties contemplated the payment of royalties on the whole of a system containing accessories and components not themselves directly incorporating Adkins' patent. That subdivision provides: "Net sales prices with respect to the sales of products incorporating inventions licensed hereunder and also containing other assemblies or components in addition thereto which do not incorporate the said inventions, shall for the purposes of determining royalties payable to Adkins, be the price established in each such contract for the 'gyro assembly' or 'gyro system' as hereinbefore defined which incorporates the inventions herein licensed."

As stated above, Lear's sole assertion in its motion for a new trial on the issue of damages relates to the definition of the term "gyro system." We have concluded that this term includes components and accessories apart from the gyro assemblies themselves. In view of the facts that, as so defined, the accuracy-affecting characteristics of these instruments were either admitted by Lear or shown by uncontradicted evidence, that Lear itself provided the sales information upon which the calculation of damages on this basis was made, and that the jury awarded the exact amount so calculated, the order for a new trial was not justified on the ground that excessive damages were awarded under the influence of passion or prejudice.

The other grounds upon which a new trial was granted were irregularity in the proceedings on the part of plaintiff by which defendant was prevented from having a fair trial, errors in law occurring at the trial, and that the verdict was against the law. We are mindful of the fact that all presumptions favor the order granting a new trial as against the verdict, that the order will be affirmed if it may be sustained on any ground and that the burden is on the party attacking the order to show an unmistakable abuse of discretion on the part of the trial court in granting a new trial. (Yarrow v. State of California (1960) 53 Cal.2d 427, 434.) Nevertheless, under the circumstances of the present case, we must conclude that the trial court's order must be reversed.

Most of the asserted errors urged by Lear in support of its motion do not consitute error in view of the matters discussed in the earlier portions of this opinion.[33] The alleged errors not covered by the prior analysis related to the question of utilization by Lear of Adkins' invention and with one or two minor exceptions[34] involved asserted errors in giving or refusing instructions on the issue of utilization. We need not discuss these claims of error since they could not have been prejudicial to Lear in view of our conclusion that the record compels a determination in favor of Adkins on this issue.

One asserted error requires further elucidation. Lear urgently contended in support of its motion, that the trial court should have permitted it to amend its answer during the trial to add the defense of unclean hands against Adkins. This defense was based on an alleged fraud upon the Patent Office in that Perry E. Turner, a patent agent who was employed by Lear from 1954 until the end of 1957 and who counseled Lear with respect to Adkins' application during that period, was subsequently employed by the law firm

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[33]Thus, Lear urged that the trial court should not have refused to instruct the jury that Adkins' patent did not cover the steel gyros as a matter of law, that the Patent Office's rejection of Adkins' application on March 21, 1957, constituted a failure of consideration as a matter of law, and that the trial court's jurisdiction of the action ended on April 8, 1959, when the agreement was purportedly terminated.

[34]Lear argued that the trial court erred in refusing to submit to the jury a large number of special interrogatories. It was also claimed that an exhibit introduced by Adkins was labeled in such a manner as to mislead the jury on the issue of the character of Adkins' invention.

which prosecuted the application in the Patent Office and assisted in the prosecution under the supervision of one of the attorneys of that firm. There was no error in this regard. First, this is not a suit in which Adkins is attempting to enforce his patent as such, and we are not concerned with defenses which might be available to Lear in the determination of questions of validity and infringement. The cause is based on rights emanating from a written agreement, and the patent itself is referred to only for the purpose of determining whether Lear used the invention therein set forth.[35] Moreover, Lear's claim of inequitable conduct by Adkins is unmeritorious on its face. Turner's employment by the law firm representing Adkins did not occur until several months after Lear breached the agreement on September 10, 1957, when it informed Adkins that it would no longer pay royalties on the steel gyros. There is no contention that Adkins was not thoroughly familiar with the steel gyros and no showing that Turner had any confidential information secured while he was an employee of Lear which he could communicate to Adkins in the amendment of his application.

The 2156 Gyro

The discussion above is also applicable to the 2156 Gyro except as it relates to coverage. The trial court applied the doctrine of licensee estoppel insofar as the 2156 gyro was concerned and held as a matter of law that Lear was barred from challenging the validity of Adkins' patent as to that instrument. It directed a verdict for Adkins on the 2156 gyro, and the parties stipulated that the royalties due for the period in ques-

[35]This reasoning also applies to other assertions by Lear that Adkins perpetrated fraud upon the Patent Office.

tion were $16,351.93. The trial court denied Lear's motion for judgment notwithstanding the verdict as to this gyro, but the order granting a new trial in the alternative covers all products in issue, including the 2156 gyro.

Lear concedes on appeal that it utilized Adkins' invention in its 2156 gyro. In view of this concession, the fact that the validity of the patent is not open to question, and the fact that the amount of damages was stipulated, the directed verdict in favor of Adkins and the denial of Lear's motion for judgment notwithstanding the verdict as to this gyro must be affirmed, and the granting of the motion for a new trial reversed.

It has been aptly stated that the trial court, no less than an appellate court, is expressly enjoined by article VI, section 13, of the Constitution, from granting a new trial for errors unless they are prejudicial, and that if it clearly appears that such errors could not have affected the result of the trial the court is bound to deny the motion. (Sparks v. Redinger (1955) 44 Cal.2d 121, 123.) Although the trial court may have erred in some regards with respect to instructing the jury on the question whether Lear utilized Adkins' invention, any errors which it may have committed could not have been prejudicial because, as we have concluded above, the jury would, in any event, have been required by the evidence to find in favor of Adkins on this issue. In view of our additional conclusions that Adkins' patent is presumptively valid and that the jury's determination of damages is correct as a matter of law, we are compelled to hold that the motion for a new trial as to the steel gyros must also be reversed.

We must, therefore, consider Lear's cross-appeal from the judgment entered on the jury's verdict on

May 4, 1964, in favor of Adkins.[36] (Cal. Rules of Court, rule 3(a); see White v. Aetna Life Ins. Co. (1961) 198 Cal.App.2d 370, 378.) The contentions on the cross-appeal are identical to those discussed above or are clearly answered by the previous discussion. The only additional matter is Lear's argument that the trial court improperly excluded two letters sent to Lear by Adkins prior to the consummation of the license agreement. It is claimed that the exclusion of these letters was erroneous because they would be material if it were found that the license agreement was ambiguous regarding its scope or Lear's right to terminate. Since there is neither a claim by the parties nor a finding that the agreement is ambiguous in these respects, there was no error in the court's refusal to admit these documents into evidence.

L.A. 29206

This appeal is by Adkins from the portion of the trial court's judgment dismissing his second cause of action, which was pleaded as an alternative in the event it was held that Adkins could not recover on the first cause of action for breach of the license agreement.[37] Adkins alleged in the second cause of action that he had an unpatentable invention embodying his ideas relating to bearing alignment and Lear was liable for use of this invention under the theories of misappropriation by Lear in breach of confidence and breach of an implied-in-fact contract, and that Lear was also liable under the

[36]This judgment was amended on December 30, 1964, to show that the trial court had dismissed Adkins' second cause of action.

[37]This is the judgment entered on May 4, 1964, on the jury's verdict in favor of Adkins and which was amended on December 30, 1964, to order the dismissal of Adkins' second cause of action.

theory of unjust enrichment. The trial court did not permit the introduction of evidence to support the second cause of action, and the jury's verdict for Adkins was based on the first cause of action. Since we have held that Adkins is entitled to recover from Lear on his first cause of action, this portion of the judgment, dismissing the second cause of action, must be affirmed.

L.A. 29207

This appeal by Lear consists of (1) its appeal from the judgment on the directed verdict as to the 2156 gyro and from the trial court's denial of its motion for judgment notwithstanding the verdict as to that product; (2) its appeal from the whole of the judgment entered on May 4, 1964, on the jury's verdict in favor of Adkins;[38] and (3) its appeal from the trial court's amendment of the judgment dismissing Adkins' second cause of action. In connection with the latter, Lear contends that although the court acted properly in dismissing Adkins' second cause of action, it should have indicated that the reason for the dismissal was that Adkins had waived the second cause of action during the trial rather than because Adkins refused to elect between his first and second causes of action. As we have seen, the portion of the judgment dismissing Adkins' second cause of action must be affirmed.

L.A. 29205

This appeal is by Adkins from a minute order of the trial court entered on January 24, 1964, requiring him to pay 45 percent of the cost of an independent audit of Lear's books. The total cost of the audit, which was

[38]The subject matter of (1) and (2) is also involved in L.A. 29204.

made at Adkins' request, was $17,880. Its purpose was to determine the number and amount of sales made by Lear of products claimed by Adkins to be royalty-bearing.

Adkins insists that the trial court's order requiring that the audit be made was imposed as a sanction against Lear for its deliberate concealment of sales information in answers to interrogatories and, therefore, that the trial court abused its discretion in imposing a portion of the cost on him.[39] However, an examination of the record shows that the court ordered the audit as an aid to it and to the parties, especially Adkins, on the issue of damages. It stated that the audit involved a financial burden which Adkins would have to undergo in any event for trial preparation and that it had no right to impose upon Lear the burden of financing Adkins' trial preparation. The trial court made it clear from the outset of the discussion of the independent audit that Adkins would be required to pay part of the cost. Prior to the court's order, Lear had spent over $15,000 in auditing costs in order to comply with Adkins' requests for information, and Adkins had spent over $5,000 in checking the information which Lear had provided.

Under all the circumstances, it cannot be said that the trial court abused its discretion in apportioning part of the auditing costs to Adkins. (Greyhound Corp. v. Superior Court (1961) 56 Cal.2d 355, 379-380.)

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[39]Initially, Adkins sought to obtain these figures by means of interrogatories. The information sought involved a number of complex problems and, although Lear made a number of attempts to furnish the information, Adkins was dissatisfied with the answers and made motions to have them stricken. He claimed that Lear was deliberately withholding the information he sought. Finally, he moved to appoint independent auditors and to have Lear pay the cost of the audit.

The judgment entered on May 4, 1964, as amended on December 30, 1964, including the portion thereof entered on the directed verdict, is affirmed. The judgment notwithstanding the verdict is reversed. The order granting the motion for a new trial is reversed. The order denying Lear's motion for judgment notwithstanding the verdict as to the 2156 gyro is affirmed. The order apportioning the costs of the audit is affirmed. The order granting judgment notwithstanding the verdict as to the steel gyros is not appealable, and the purported appeal therefrom is dismissed.

Adkins shall recover his costs on appeal.

Mosk, *J.*

We Concur:

Traynor, *C. J.*
McComb, *J.*
Peters, *J.*
Tobriner, *J.*
Burke, *J.*
Sullivan, *J.*

Order Denying Rehearing.

Order Due January 12, 1968.

In the Supreme Court of the State of California, in Bank. L.A. Nos. 29204, 29205, 29206, 29207.

Adkins v. Lear, Inc.

Petition of Defendant and Appellant for rehearing DENIED.

Filed, Jan. 11, 1968.

Traynor
Chief Justice

Remittitur — Issuance and Filing.

In the Supreme Court of the State of California, in Bank. L.A. 29204, 29205, 29206, 29207.

Adkins v. Lear, Inc.

Filed, Jan. 15, 1966

Application for stay of issuance of remittitur DENIED. This order is final forthwith.

Remittitur Issued—Jan. 15, 1968.

Traynor
Chief Justice

Stay of Enforcement.

In the Supreme Court of the State of California, in Bank. L.A. Nos. 29204, 29205, 29206, 29207.

Adkins, v. Lear, Incorporated.

Filed Jan. 24, 1968.

Application for stay of the enforcement of orders and judgments is granted and the decision of this court reported in 67 A.C. 911, is hereby stayed to and including April 11, 1968, to permit the filing of a contemplated petition for writ of certiorari with the Supreme Court of the United States.

Upon the filing of such petition, the orders and judgments are hereby further stayed until final determination of the proceeding in the Supreme Court of the United States.

This stay to become effective upon the filing of a surety bond in the amount of $1,200,000.00 (One Million Two Hundred Thousand Dollars) to be approved by a judge of the Superior Court of the County of Los Angeles.

Traynor
Chief Justice

Opinion of the District Court of Appeal.

In the District Court of Appeal of the State of California, Second Appellate District, Division Two.

John S. Adkins, Plaintiff, Appellant and Cross-Respondent, vs. Lear, Incorporated, Defendant, Respondent and Cross-Appellant. Civ. Nos. 28624, 29770, 30052, 30089.

Filed Aug. 8, 1966.

Appeals from judgment and orders of the Superior Court for Los Angeles County. Brodie Ahlport, Judge. Judgment n.o.v., reversed. Order denying defendant's motion for judgment n.o.v. in part, reversed. Order granting new trial, affirmed. Judgment as amended dismissing second cause of action, affirmed. Action remanded for new trial on issue of damages only. Appeals from order granting motion for judgment n.o.v. in part, and from order apportioning costs of audit dismissed.

Rosenfeld, Meyer & Susman, and Peter R. Cohen, for Appellant.

Christie, Parker & Hale, C. Russell Hale, Edwin L. Hartz, and Kenneth C. Newell, for Respondent.

This is an action for damages for breach of an agreement dated September 15, 1955, hereafter referred to as the license agreement, and for unjust enrichment (first cause of action) and, in the alternative for breach of an implied contract, misappropriation and unjust enrichment (second cause of action).

Plaintiff Adkins, under the license agreement, granted an exclusive license to defendant Lear, Incorporated, herein referred to as Lear, to manufacture and sell "products and parts and components thereof

(including gyros, gyro systems, gyro apparatus and gyro mechanisms) covered by or containing one or more of all the inventions and any patents issued or hereafter issued thereon," under the claims of Adkins' then pending application for a patent, upon payment of agreed royalties. It was understood by the parties that the word "claims" as used in the license agreement shall mean the claims of the then pending application for a patent "which have been or will be patentable by Adkins." The agreed royalties were to be paid only "[w]hile one or more of the licenses granted under this Agreement is in effect."[1]

The case was tried to a jury on the first cause of action on Adkins' claim for damages with respect to five models of gyroscopes manufactured by Lear. As to one model, No. 2156, the court directed a verdict for Adkins. On the other four models, Nos. 2151, 2152, 2153 and 2171, here collectively referred to as the "steel" gyros, the jury returned a verdict in favor of Adkins. Judgment on the verdict on the first cause of action was entered on May 4, 1964. On July 2, 1964, the court (1) denied Lear's motion for judgment n.o.v. on model 2156; (2) granted the motion as to the other four models; and (3) granted Lear's motion for a new trial in the alternative as to all models. Judgment n.o.v. was entered accordingly on July 15, 1964.

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[1]Adkins in fact granted Lear three licenses in identical terms under the claims of a certain patent referred to as "Exhibit 'A'", and under the claims of certain patent applications referred to as "Exhibit 'B'" and "Exhibit 'C'". The only license involved here is that under the claims of "Exhibit 'B'", being the application for letters patent filed by Adkins on February 15, 1954 ,"and all patents issued or issuing thereon to Adkins with respect to the inventions disclosed or intended to be disclosed therein."

Civ. No. 28624 includes (1) Adkins' appeal from the judgment n.o.v. for Lear on the "steel" gyros and from the order granting Lear's motion for a new trial; (2) Lear's appeal from the judgment on the directed verdict as to model 2156 and from the denial of its motion for judgment n.o.v. on that model; and (3) Lear's appeal from the whole of the judgment entered May 4, 1964.

The judgment was amended December 30, 1964, dismissing Adkins' second cause of action pursuant to the mandate of this court in Civ. No. 28603.

Civ. No. 30089 includes Lear's renewed appeal as to items (2) and (3) in Civ. No. 28624 (renoticed as a matter of precaution), and its appeal from the amendment of December 30, except as to the dismissal of the second cause of action.

Civ. No. 30052 is Adkins' appeal from the dismissal of his second cause of action by the judgment as amended December 30, 1964.

Civ. No. 29770 is Adkins' appeal from an order apportioning the cost of an independent audit during discovery proceedings.

Factual Background

Adkins is a mechanical engineer. Lear is a manufacturer of aircraft flight instruments, including gyroscopes, gyro systems, gyro apparatus and gyro mechanisms, with a research and development facility in Santa Monica, California, and a development and production facility in Grand Rapids, Michigan.

Adkins joined Lear in Santa Monica as an inventor in January 1952, following the execution of an

agreement in December 1951 in which Adkins agreed in substance to disclose and license to Lear all ideas, discoveries and inventions relating to gyroscopes, hereafter referred to as gyros, in return for a "mutually satisfactory royalty." Upon his employment Adkins went to work in Santa Monica developing gyros with higher precision than those then being manufactured by Lear which could be produced at a lower cost.

We are concerned here with the manufacture of gyroscopes as used in aircraft to tell the pilot the direction and attitude of the aircraft. Simply stated, the gyro maintains its fixed position in space and the movements of the aircraft around it are measured electronically and recorded on gauges. In all gyros in issue here there is a part called a rotor, driven electrically at high speed. The rotor is mounted in a "gimbal ring", sometimes called the inner gimbal ring or inner axis, which in turn is mounted on the outer gimbal ring or axis, the whole structure being mounted in a frame fixed to the aircraft. Each gimbal ring, when fully assembled, has two short axle ends 180° apart, called trunions, which lie on a common axis. Each trunion is inserted into a bearing element which is fixed in the gimbal assembled around it. Each bearing element consists of an inner and an outer race or ring and a plurality of balls between the two races. The most important factor in achieving gyro accuracy is accurate alignment of the pair of ball bearing elements on the opposite ends of the gimbals with each other. The faces of the bearing elements must be parallel with each other and the centers must be coaxial with each other in order to avoid friction and consequent drift of the gyro rotor from its stable position in space. Gyros which indicate the direction of the aircraft are known as directional

gyros, while those which indicate its pitch and roll are known as vertical gyros.

In the summer of 1952, after experimenting with and rejecting the use of self-aligning ball bearing elements or cups, Adkins conceived his invention of a means of holding a pair of bearing elements in pre-aligned coaxial and parallel relationship to each other and cementing them in place in oversize holes in the gimbal, and immediately communicated his invention to Lear. By September 1952 Adkins had completed two experimental models for vertical gyros with cemented in bearing elements. At this time Lear was engaged in producing vertical gyros for the Air Force in a competition with other manufacturers. It was accordingly decided that Adkins would work on directional gyros and Lear, at Grand Rapids, would begin experimental work on improving its vertical gyros. Both, of course, were working on the production at low cost gyros having a high precision which would be more difficult for Lear's competition to obtain. Thereafter Adkins adapted his invention to the Navy requirements for a directional gyro system known as the MA-1 Compass System. The gyro in this system was designated as model 2156.

In its experiments at Grand Rapids, Lear first used a flanged cylindrical bearing element fitting into a cylindrical hole in the gimbal and a flat metal washer with two knife-like projections placed over the clyindrical portions of the bearing cup, referred to at the trial as a "tippy washer," which permitted the bearing element when inserted in the receiving hole to rock on the washer in two different planes. This was referred to at the trial as a self-aligning "knife edge" type of con-

struction. In the fall of 1953, Lear abandoned this type of construction in its models 2151 and 2152 and decided to adopt the construction used by Adkins in model 2156. The first such use of this method was in October 1953. The evidence shows that some time later the same method of construction was used by Lear in the construction of models 2151 and 2171. The only difference between model 2156 as developed by Adkins and the other models as developed by Lear in Michigan was in the shapes of the bearing elements and receiving holes and in the size of the flange used in the bearing element in model 2171.

As originally filed in February 1954, Adkins' application for a patent, described as Exhibit "B" in the agreement, and so far as material here, included the following claims: "7. A method of aligning bearings supporting a relatively movable element . . .; 8. A method of aligning bearings in coaxial relationship and parallel planes for supporting a rotatable element in mounting, . . .; 9; An alignable bearing structure for supporting an element movable with respect to another element, . . ." Examination of the file wrapper shows that these claims were rejected by the Patent Office September 18, 1954, "as being substantially fully met by the patent to Carlson." On March 7, 1955, Adkins cancelled claims 7 and 8, amended claim 9 in one particular, and submitted new claims 18 and 19 with reference to the "method of bearing alignment." This was the status of the application when the license agreement was executed.

It should be said here that, as a part of the consideration for the licenses granted to it, Lear reimbursed Adkins for patent costs already incurred by him and

agreed to pay all costs for preparation and prosecution of all applications for patents on inventions set forth and disclosed in Exhibit "B", provided Adkins secured Lear's prior written approval therefor. Adkins agreed to prosecute his applications and to "submit all such applications to Lear for approval prior to the filing thereof." It was further agreed that "Adkins shall immediately upon receipt by him, furnish to Lear a copy of each action taken by the U.S. Patent Office with respect to such applications and to consult with Lear before taking any action with respect thereto, and also to notify Lear when a patent or patents have issued."

On March 21, 1957, the Patent Office notified Adkins that "Claims 9, 18, and 19 are rejected as being obviously fully met by the patent to Grenat." Thus it appears that all Adkins' claims had been rejected by the Patent Office when Lear wrote Adkins on September 10, 1957, that his application, Exhibit "B", "does not disclose any inventions utilized in any Lear equipment except the MA-1 system and certain components thereof [model 2156]. Specifically, we do not believe that any models of the so-called 'Steel Gyro' come within the scope of Exhibit 'B'. We have made a search of the U. S. Patent Office files and believe that the method of bearing alignment heretofore and currently used in assembling the Lear 'Steel' gyroscopes is not patentable."

In response to the Patent Office action of March 21, 1957, Adkins again amended his application on Sep-

tember 27, 1957, further amending claims 9, 18 and 19, and adding new claims 20 and 21, each on an "alignable bearing construction." A supplemental amendment, dated December 31, 1957, adding new claims 22 through 26, each on "an alignable bearing construction", was filed with the Patent Office January 13, 1958, shortly after Adkins terminated his employment with Lear. On January 20, 1958, the Patent Office rejected amended claims 9, 18 and 19 "as being fully met by Grenat," and rejected the new claims 20 through 26 "as being fully met by the patent to Sperry."

On December 22, 1958, Adkins filed a further amendment to claim 9 and submitted new claims 27 and 28 in place of claims 18 and 19, and added certain new material to the specifications. On March 4, 1959, Adkins cancelled his claims 9, 27 and 28 and substituted new claims 29 through 41, claims 29 through 36 being on "an appartus or supporting bearings in aligned relationship." The application as thus amended was pending when Lear wrote Adkins on April 8, 1959, that it was "exercising its rights and options to terminate the agreement and the licenses therein granted." On July 21, 1959, the new claims 29 through 36 were allowed and renumbered by the Patent Office as claims 9 through 16, and a patent on those claims was issued January 5, 1960.

Adkins' complaint was filed in January 1960 shortly after the issuance of the patent. After extensive discovery and pretrial proceedings the case went to trial in 1964 on the first cause of action only.

Appeals Relating to the Judgment N.O.V.

Adkins sought to recover damages for breach of the license agreement and for unjust enrichment after the purported termination of the agreement by Lear in April 1959, based primarily on claims 9, 13, 14 and 16 of his patent.

During the trial the court denied Lear's motion for a directed verdict, which was made on some twelve grounds, each of which was to the effect that all of Adkins' alleged causes of action "are void and unenforceable" for the reasons stated in the notice of motion. At the conclusion of a lengthy trial, the court on its own motion directed a verdict in favor of Adkins on the 2156 gyro as a part of MA-1 compass system, and it was stipulated that on that model Adkins was entitled to recover $16,351.93 for the period from January 1, 1955 to May 31, 1963. The case then went to the jury on instructions to determine whether the patent was invalid in respect to the four "steel" gyros, whether the patent "covers and is infringed" by one or more of those gyros, and whether the license agreement had been breached by Lear and the damages suffered by Adkins. The jury returned a verdict for Adkins and judgment was entered on May 4, 1964, for $904,474.49 which was the full amount of his claim with interest.

Lear moved for a judgment n.o.v. "upon the grounds stated in defendant's motion for a directed verdict and that there is no sufficient evidence substantially to support a verdict in favor of plaintiff." The court denied the motion as to model 2156, with this comment: "The court directed a verdict for plaintiff for $16,351.93 as royalty under a license agreement for the use of plain-

tiff's bearing structure as described in patent no. 2-919-586. Defendant's liability for this amount rested upon its status as a licensee. Under the established rule it was estopped to deny the validity of its licensor's patent." The court granted the motion as to the "steel" gyros, holding as to these models that "the rule of estoppel does not apply," that the patent is invalid, and that "since, as a matter of law, neither of defendant's devices could be the subject of a valid patent to anyone, it follows that plaintiff cannot claim them as equivalents under or as infringing his patent (even if valid)." Judgment was entered accordingly on July 15, 1964, and both Adkins and Lear appealed.

The overall question to be decided on the appeals from the judgment n.o.v. is whether the evidence was sufficient to support the verdict in favor of Adkins. A motion for a judgment n.o.v. may be granted by the trial court "only where, disregarding conflicting evidence on behalf of the defendants and giving to plaintiff's evidence all the value to which it is legally entitled, therein indulging in every legitimate inference which may be drawn from that evidence, the result is a determination that there is no evidence of sufficient substantiality to support a verdict in favor of the plaintiff." (*Reynolds v. Willson,* (1958) 51 Cal.2d 94, 99.) On a motion for a judgment notwithstanding the verdict in favor of defendants the trial court "is not permitted to weigh the evidence, and on an appeal from the judgment entered on the granting of such a motion, the appellate court must read the record in the light most advantageous to the plaintiff, resolve all conflicts in his favor, and give him the benefit of all reasonable inferences in support of the judgment." (*Quintal v. Laurel Grove Hospital,* 62 Cal.2d 154, 159.)

The Scope of the Bargain

The verdict of the jury was necessarily based on the implied finding that the license as granted to Lear extended to the patent issued to Adkins in January 1960, and that the gyros manufactured by Lear were covered by that patent. A proper construction of the license agreement leads us to the conclusion that there is no substantial evidence to sustain this implied finding.

The parties are agreed that Adkins' right to recover under his first cause of action is based upon the license agreement. Adkins contends that under that agreement he is entitled to the payment of royalties for the use of his invention as defined in the claims of his application for a patent and in the claims of the patent itself. Lear contends that it did not get what it bargained for under the license agreement, in that the invention as there defined was not patentable, and that after the termination of the license agreement in April 1959 it was a stranger to the patent as issued several months later. It was stipulated at the trial that Lear continued to make all five gyros after it had terminated payment on all except model 2156 in September 1957 and after it terminated the license agreement in April 1958. There is no suggestion that the license agreement is ambiguous.

The construction of the license agreement is governed by state law. As the court said in *Farmland Irrigation Co. v. Dopplmaier,* 48 Cal.2d 208: "It has been established by a long line of cases moreover, that an action to set aside, specifically enforce, or recover royalties on a patent license contract is not an action arising under the patent laws of the United States for the purpose of

determining the exclusive jurisdiction of the federal courts. [Citations.] State courts have jurisdiction over such actions, and in the absence of diversity of citizenship it is exclusive of the federal courts." (P. 217.) "The plaintiff's cause of action arose under and was governed by the general common law of contracts. . . . [T]he law governing the elements of the plaintiff's cause of action is state law—state law acting of its own force and not merely by incorporation into federal law." (P. 218.) (To the same effect see *Lear Siegler, Inc. v. Adkins,* 300 F. 2d 595, affirming an order staying proceedings in the U.S. District Court relating to the agreement and patent involved here.)

In our opinion the proper construction of the license agreement supports Lear's contentions. The license agreement before us was negotiated after Adkins had disclosed his invention to Lear as required by the agreement of December 29, 1951, and by its express terms cancelled and superseded that agreement. In the license agreement Adkins represented and warranted that "to the best of his knowledge and belief *he is the owner of the inventions* covering the substantial claims as disclosed or intended to be disclosed in the Application for U.S. Patent on gyroscopes attached hereto and hereafter referred to as Exhibit 'B' and incorporated herein as a part hereof, which application was filed February 15, 1954, and is presently pending in the United States Patent Office and that there are no licenses or agreements outstanding which prevent him from granting unto Lear *an exclusive license respecting said inventions* and products embodying *said inventions,* in accordance with the provisions hereof; . . ." "[I]n consideration of the foregoing and $500.00 in hand paid,

. . . and of the covenants and conditions hereinafter contained," Adkins granted to Lear "(2) *an exclusive license under all the claims* of Exhibit 'B' . . .; it is understood, however, *that whenever the word 'claims' is used* in this paragraph *it shall mean the claims in the respective Exhibits which* have been patented or *will be patentable by* Adkins." Exhibit "B" is "deemed to refer to and include" Adkins' application for a patent filed February 15, 1954, "and all patents issuing thereon to Adkins with respect to the inventions disclosed or intended to be disclosed therein." An invention as used in the agreement is defined in 1(d) as: "The term 'said inventions' as used in this Agreement shall include . . . (2) all claims and inventions disclosed or intended to be disclosed in said Exhibit 'B' . . . *but only to the extent that such claims or inventions* mentioned in said Exhibits *are patented or patentable by Adkins.*"

Paragraph 3(a) of the agreement relating to royalties provides that while the license is in effect, "Lear agrees to pay Adkins with respect to products incorporating *said inventions* [see definitions above] . . . royalties of 1¼% based on net sales prices . . . received by Lear for said products, *it being understood that said rate shall be paid only on products incorporating* one or more or all of *said inventions.*" (Emphasis added.) Under paragraph 3(g) "[u]nless this Agreement is sooner terminated as herein provided," Adkins was entitled to receive certain minimum royalties on account of "products manufactured and sold by Lear," provided the license as to Exhibit "B" "in force and effect, . . . (b) embodying the inventions disclosed or intended to be disclosed in Exhibit 'B'," as a credit in reduction

of the royalty payments due Adkins under paragraph 3 for each year.

We think it is evident from the provisions of the license agreement that what Lear was interested in and willing to pay for was the right to use Adkins' invention, that is, the right to use what was new and constituted progress over apparatus already known to the trade which were patentable by Adkins. It seems highly improbable that Lear would agree to pay royalties indefinitely on parts long known, and which until the time of the license it could have manufactured and sold royalty free. The provisions defining sums received from license sales provide in effect that a royalty would be due on sums received on sales of products incorporating Adkins' inventions to the extent only that the claims of his then pending application were patentable. The agreement to continue the payment of royalties is tied directly to the test of the patentability of the claims of his then pending application. (Cf. *Farmland Irrigation Co. v. Dopplmaier,* 48 Cal.2d 208, 224-225; and cf. *Eastman Oil Etc. Corp. v. Lane-Wells Co.,* 21 Cal.2d 872, holding that "the term royalty ordinarily envisages a duty to make and a corresponding right to the use of patented methods on machines.")

The question here is whether Adkins' inventions as described in the claims of his application were patentable. By repeatedly expressing this requirement in the license agreement, the parties intended that unless the invention was patentable under the laws of the United States, Lear would be under no continuing legal obligation to Adkins. Thus we are required to focus our attention "on the patentability of inventions under the standard of Art. I, § 8, ch. 8, of the Con-

stitution and under the conditions prescribed by the laws of the United States," (*Graham v. John Deere Co.*, 383 U.S. 1, 15 L.Ed.2d 545,) rather than on the "validity" of the patent *per se*.

It is beside the point that when the license agreement was executed, the parties agreed that "the MA-1 compass Lear Model No. 5005 [incorporating gyro model 2156], the Directional Steel Gyro Lear Model No. 2152, and the Vertical Steel Gyro Lear Model No. 2153, are the only products manufactured by Lear under the licenses herein granted, which contain any of the inventions or claims described and covered by the respective Exhibits of this Agreement," and it is equally beside the point that the invention was later incorporated in Lear's models Nos. 2151 and 2157. At the most, Adkins had but one "invention" which he first disclosed to Lear in July 1952, and on which he later applied for a patent. Adkins' right under the license agreement to the continued payment of royalties was expressly conditioned upon the patentability of that invention and the claims of his application for a patent. If that invention as so claimed was not patentable, either as incorporated in model 2156 as developed by Adkins in Santa Monica or in the "steel" gyros in which it was used by Lear in Grand Rapids, Lear's continuing obligation to pay royalties thereon would come to an end.

The provisions of the license agreement just referred to must be read "in the light of the subject matter of the contract and the apparent intention of the parties." (*Eastman Oil Etc. Corp. v. Lane-Wells Co.*, 21 Cal.2d 872, 873.) Since the patentability of the invention could only be determined in the first instance by the Patent Office and ultimately by the courts (*Graham v.*

John Deere Co., 383 U.S. 1, 15 L.Ed.2d 545), neither the license agreement that certain products manufactured by Lear in September 1955 incorporated Adkins' inventions or claims described and covered by Exhibit "B", nor Lear's letter of September 1957 can be considered as an admission by Lear that Adkins' invention was patentable.

As we have seen, the license agreement here was entered into in consideration of the patentability of Adkins' "invention" and the claims described in Exhibit "B". In September 1957 Lear concluded that Adkins' patent application did not disclose any inventions utilized by any Lear equipment, and that the method of bearing alignment used by Lear in assembling the "steel" gyros is not patentable. This conclusion was obviously based on the Patent Office action of March 1957 rejecting Adkins' claims as they stood at the time the license agreement was executed, and fairly anticipated the Patent Office action of January 20, 1958, rejecting the claims as amended by Adkins in March 1957 and on January 13, 1958. The actions of the Patent Office in March 1957 and in January 1958 rejecting all claims then pending constituted "final adverse action by the Patent Office". Adkins recognized the finality of this action in March 1959 when he cancelled all his previous claims and submitted the new claims on which the patent was finally issued. The issuance of the patent in January 1960 did not revive the claims which had been rejected. "It is well established that the claims of a patent must be read and interpreted in the light of claims which had been rejected. . . . Claims which have been allowed cannot, by construction, be read to cover what has thus been eliminated

from the patent. *Schriber-Schroth Co. v. Cleveland Trust Co.*, [311 U.S. 211], (rehearing denied 312 U.S. 654, 61 S.Ct. 235, 85 L.Ed. 132)." (*Oregon Saw Chain Corp. v. McCulloch Motors Corp.*, 323 F.2d 758, 768.) Furthermore, as the court said in *Oregon Saw Chain*, the patentee "cannot regain 'by recourse to the doctrine of equivalents' that which he, by strict construction of the claim, has disclaimed. The doctrine of equivalents 'at most operates, by liberal construction, to secure to the inventor the full benefits, *not disclaimed*, of the claims allowed'. (*Exhibit Supply Co. v. Ace Corp.*, 1942, 315 U.S. 126 at 136-137, 62 S.Ct. 513, at 518, 86 L.Ed. 736. Emphasis added.)"

Here, in contrast with *Del Riccio v. Photochart*, 124 Cal.App.2d 301, 309-312, the patentability of Adkins' invention was the major, material consideration for the license agreement. When the Patent Office determined that that invention was not patentable "the heart of the contract at bar" failed, and upon giving notice to Adkins of its termination in April 1959, Lear was relieved of its obligations to Adkins under the license agreement after such Patent Office action.

Estoppel to Attack Validity of Patent

Adkins urgently contends that in this action Lear is estopped to attack the validity of his patent. He relies on the rule as stated in *Automatic Radio Mfg. Co. v. Hazeltine Research*, 339 U.S. 827, that "the licensee under a patent license agreement may not challenge the validity of the licensed patent in a suit for royalties due under the contract." He also relies on *Bowers Mfg. Co. v. All-Steel Equipment, Inc.*, 275 F.2d 809, and *Del Riccio v. Photochart*, 124 Cal.App.2d 301, 312, in

which this rule was followed. This has always been the rule in California. (*Martin v. Pinney,* 163 Cal. 652, 654.)

We have concluded that there is no basis on which Adkins can invoke the doctrine of estoppel for the reason that the validity of the patent issued to Adkins in January 1960 is not in issue here.

Adkins' contention is necessarily based on the assumption that a patent was issued on the claims of the application described in the license agreement, and that the five gyros involved here were covered by his patent, and on his contention that the license agreement was not validly terminated by Lear. Adkins' assumption that the patent was issued on the claims of his application described in the license agreement is not warranted by the record. As we have seen, the claims of the application as they stood in September 1955 and as amended in March 1957 were all rejected by the Patent Office, and that the patent issued to Adkins in January 1960 was based entirely on the new claims filed by him in July 1959. So far as the rejected claims are concerned, the case thus comes within the rule that when an invention is not patentable, the patent laws preclude an invention from involving the doctrine of estoppel as a means of continuing, as against his license, the benefit of a non-existent monopoly, just as they preclude the licensee from estopping himself "from enjoying rights which it is the policy of the patent laws to free from all restrictions." (*Scott Paper Co. v. Marcalus Mfg. Co.,* 326 U.S. 249, 257, 90 L.Ed. 47, 52.) None of the cases relied on by Adkins is in point here for the reason that each of them involved a licensed patent.

Lear concedes that it would be estopped to contest the validity of any patent issued to Adkins on the claims of his application described in the license agreement so long as it continued to operate under that agreement. It contends, however, not only that no such patent was issued, but further that this estoppel no longer existed after it terminated the agreement in April 1959. It relies on the rule stated in *Stimpson Computing Scale Co. v. W. F. Stimpson Co.*, C.C.A. 7th, 104 F. 893, *The Armstrong Co. v. Shell Oil of California*, 98 Cal.App. 769, 779, and several other cases that after the termination of a license the parties are freed from the estoppel resting upon them, and that thereafter the licensee, in an action for royalties under the license agreement, may attack the validity of a patent issued to the former licensor to the same extent as a stranger might.

The exception relied on by Lear is clearly applicable here. As the court said in *Armstrong* (p. 779): "A licensee is estopped to show the invalidity of licensed patents as a defense to an action for royalties only so long as the relation of licensor and licensee continues and the licensee uses and enjoys the benefit and protection of the patents covered by the agreement. . . . A licensee, if the patents are in fact invalid, may, without waiting to be evicted, denounce and abandon the license, and after giving notice thereof to the licensor, may defend against an action to enforce the license or to recover royalties subsequently accruing, with the same freedom as may a stranger to the patent, and the licensor is remitted to his infringement suit."

On April 8, 1959, Lear gave written notice to Adkins that it thereby "exercises its rights and options to ter-

minate the agreement and the licenses thereunder," referring particularly to paragraphs 2(a) and 6 of the agreement. Lear thus placed itself in the position of a stranger both to the then pending patent application as well and to the patent which was issued some nine months later on the new claims which were not made by Adkins until July 1959.

Adkins' contention that the license agreement was not effectively terminated by Lear's letter of April 8, 1959, is equally without merit. Under paragraph 2 of the agreement, Lear had "the right on ninety days' prior written notice to Adkins, to terminate any one or more of the [three] licenses herein granted," including the license under Exhibit "B". It is provided in paragraph 6, that "in the event the Patent Office refuses to issue a patent on the substantial claims of the application attached as Exhibit 'B', . . . then . . . Lear at its option shall have the right forthwith to terminate the specific license so affected or to terminate this entire Agreement and no further royalties shall thereupon be payable under the license so terminated or under this Agreement if Lear shall have elected to terminate this Agreement in its entirety."

It is apparent from the facts shown in the Patent Office file wrapper delineated above that as of April 8, 1959, the Patent Office had refused to issue a patent on any of the substantial claims of Adkins' application then pending and had, in fact, refused to issue a patent on any of those claims. Lear was thus well within its rights on that date in terminating both the license and the agreement in its entirety. The case is thus distinguishable from *Bowers Mfg. Co. v. All-Steel Equipment, Inc.*, 275 F.2d 809, which involved a licensed pat-

ent. There the licensee was held to its agreement because neither of the events set forth in the agreement permitting cancellation had occurred. When, as here, the license agreement contained no recital or clause admitting the patentability of Adkins' invention and no stipulation not to dispute or contest the patentability thereof, Lear, having ascertained that the invention was not patentable under any of the substantial claims of the application, could refuse to be bound thereby and, upon termination and notice as provided in the license agreement, could defend against Adkins' action for royalties as freely as may a stranger. In such a case, "there is no continuing consideration for the agreement." (*The Armstrong Company v. Shell Company of California,* 98 Cal.App. 769, 779-780.)

The controlling issue here is whether Adkins obtained a patent on the relevant claims of his application which was the subject matter of the license agreement. The record shows that the Patent Office expressly refused to issue a patent on any of those claims even after they had been amended. The patent issued to Adkins in January 1960 based on his new claims filed after the termination of the license agreement was not a part of the subject matter of the license granted by that agreement. Consequently the validity of that patent is not in issue in this action to recover royalties payable as provided in the license agreement. It is thus unnecessary to consider whether the five gyros involved here are covered by the claims of that patent. On that issue Adkins is relegated to an action for infringement.

Unjust Enrichment

Adkins further contends that even though the license and the agreement were terminated by Lear's letter of April 8, 1959, Lear was still liable to him on the theory of an implied contract if it continued to manufacture the four "steel" gyros. This contention is based on *Seagren v. Smith,* 63 Cal.App.2d 733. There the licensee held a license to manufacture certain pumps invented by the licensor on which he had already received a patent, and no question of infringement or of the patentability of the invention was involved. After the licensee cancelled the agreement the licensor continued to manufacture the same pumps it was theretofore manufacturing under the agreement. The court held that as to the pumps manufactured after the cancellation of the agreement, the licensee was liable to the licensor "upon the theory of implied contract based upon the well-recognized and settled principle that a person shall not be permitted to enrich himself at the expense of another. (17 C.J.S. pp. 322-323.) Clearly, the trial court had jurisdiction of that portion of appellant's cause of action which arose after the cancellation of the agreement, upon the theory of implied contract."

In our opinion, *Seagren v. Smith* is readily distinguishable from the case before us. Here, as we have seen, the license agreement was terminated because the Patent Office had refused to issue a patent on any of the substantial claims of the application. This being so, Lear could not thereafter be held liabile to Adkins on the theory of unjust enrichment because it continued to use Adkins' unpatentable invention. (Cf. *The Armstrong Company v. Shell Company of California,* 98 Cal.

mental ideas embodied in the Reynolds invention but also a specific application of those ideas evolved by Reynolds himself and communicated to defendant because of the confidential relationship into which the parties had entered for the development of the invention. In other words, defendant is not an independent manufacturer, nor is it a mere licensee manufacturing a machine obtained from an independent source. It is a licensee who was working with Reynolds in the joint enterprise of developing his machine for the market, and who brought out a machine based upon his ideas which he conceived and which he communicated in aid of the joint enterprise. There can be no question but that defendant is liable for royalties on the machines embodying Reynolds' idea so communicated, quite irrespective of patent coverage or the terms of the license contract. That there was a confidential relationship existing between defendant and Reynolds when they agreed to work together for the development and marketing of his invention is so clear as not to admit of argument. Cf. *Baker Oil Tools v. Burch*, 10 Cir., 71 F.2d 31, 37."

As to the measure of damages to be awarded in such cases the court said in *Saco-Lowell Shops*, 141 F.2d at 598, that the measure of recovery is the royalty provided in the license agreement.

The law of this state as to the liability of the licensee in such a case is to the same effect. In *Davis v. Kittle Mfg. Co.*, 134 Cal.App. 254, the court said at p. 262: "Appellant next contends that 'plaintiff cannot collect royalties on future inventions.' The rule appears to be otherwise. 'The license may be given before issuance of patent. . . .' (48 C.J., p. 264.) 'The

inventor of an unpatented device may make a valid contract for its manufacture, use or sale. It is no objection to the validity of such a contract that any person may manufacture it until a patent is issued. . . . If, therefore, the defendant contracted to pay a royalty before patent was issued, the plaintiff is entitled to recover.' (*Hamilton v. Park McKay Co.*, 112 Mich. 138 [70 N.W. 436], citing numerous authorities.) This contention is without merit."

To sum the matter up, it appears to us that when the Patent Office refused to issue a patent "on the substantial claims of the application" there was an end to Lear's obligation under the license agreement; and that Lear was then well within its rights in terminating both the license and the agreement in its entirety in April 1959. The patent which was finally issued to Adkins in January 1960 was not a patent on the claims of Adkins' application as it stood when the license agreement was executed, or on the claims made by Adkins in September 1957, or on those made in December 1958 which were cancelled by Adkins in March 1959. Consequently the patent was not within the scope of the license and the question of its validity was not before the trial court. As the case stands, however, the termination of the license and the agreement did not relieve Lear of its entire obligation to Adkins.

Under the law as we find it, Lear is still liable to Adkins for royalties due under the license agreement from January 1, 1955, until it came to an end on April 8, 1959. This is in accord with paragraph 3(c) of the license agreement providing that Lear would account to Adkins quarterly on "the net sales prices received on all sales by it of products subject to royalty under the

licenses herein granted which are then in effect during each quarter-annual period beginning January 1, 1955."

In view of our conclusions as to the law which must control our decision, it would serve no useful purpose to consider the numerous other points raised and extensively argued by both Adkins and Lear on their respective appeals relating to the judgment n.o.v.

By its verdict the jury awarded damages in the full amount claimed by Adkins for the period from January 1, 1955 to May 31, 1963. Under the rules discused above, Adkins was entitled to royalties due to him under the license agreement on all five gyro models for the period during which that agreement was in force, that is, from January 1, 1955 to April 8, 1959, when the license agreement was terminated. There is no evidence sufficiently substantial to sustain the verdict for royalties for the period after April 8, 1959. It follows that in directing a verdict for Adkins as to gyro model 2156 for royalties for the longer period and in denying Lear's motion for judgment n.o.v. with respect thereto, the trial court was in error. Similarly, the court was in error in granting Lear's motion for judgment n.o.v. with respect to the four "steel" gyros, thereby denying all relief to Adkins with respect thereto. Accordingly the judgment n.o.v. must be reversed.

Appeal from Order Granting
A New Trial in the Alternative

Concurrent with its determination of Lear's motion for judgment n.o.v., the trial court granted Lear's motion for a new trial on each of four grounds assigned therefor, including "insufficiency of the evidence to justify the verdict, or that it is against law." In its

ruling on this motion the court found "specifically that the evidence was insufficient to justify the verdict and that the verdict is against law, and grants a new trial on each of said grounds" and filed its written order accordingly, pursuant to Code Civ. Proc., § 657.

Adkins' first point on appeal from this order is that the trial court erred in holding that the damages awarded by the jury were not the result of passion or prejudice. We find no error in this determination. "To say that a verdict has been influenced by passion and prejudice is but another way of saying that the verdict exceeds any amount justified by the evidence." (*Zibbell v. Southern Pacific Co.*, 160 Cal. 237, 254; *Koyer v. McComber*, 12 Cal.2d 175, 182.) Similarly "[i]n passing upon a motion for a new trial based upon the insufficiency of the evidence, it is the exclusive province of the trial court to judge the credibility of the witnesses, determine the probative force of testimony, and weigh the evidence [citations]. . . . It is only where it can be said as a matter of law that there is no substantial evidence to support a contrary judgment that an appellate court will reverse the order of the trial court." (*Brooks v. Metropolitan Life Ins. Co.*, 27 Cal.2d 305, 307.)

The parties are agreed that to the extent Lear is liable to Adkins under the license agreement, the award of damages must be based on paragraph 3 of the agreement. That paragraph provided that royalties would be computed on the net sales prices of Lear's products incorporating one or more of Adkins' inventions, including the price charged for "gyro assemblies" and "gyro systems" as those terms are defined in the agreement. Competent evidence was introduced

App. 769.) We agree with Lear that when an article is unpatentable and therefore in the public domain, it may be made and sold by whomever choses to do so, and that as a general rule the inventor cannot recover damages under state law because this would interfere with federal policy as found in the Constitution, Art. 1, sec. 8, ch. 8, and the implementing federal statutes. (*Sears Roebuck & Co. v. Stiffel Co.*, 376 U.S. 225; *Compco Corp. v. Day-Brite Lighting, Inc.*, 376 U.S. 234; *Cable Vision, Inc. v. KUTV, Inc.*, 385 F.2d 348, 351.) While Adkins may be entitled to protection of the invention for which he obtained his patent in an action for infringement, he is not entitled in this action to collect royalties for the use of the invention referred to in the license agreement after a patent on that invention under the claims of his application had been denied by the Patent Office. (*Marvin v. Mills Alloys, Inc.*, 31 Cal.App.2d 549; see also *The Armstrong Company v. Shell Company of California*, 98 Cal.App. 769, 779.)

It appears to us that the case here is to be determined by the rule stated in *Eclipse Bicycle Co. v. Farrow*, 199 U.S. 581, 50 L.Ed. 317, and *Saco-Lowell Shops v. Reynolds*, 141 F.2d 587.

The facts in *Eclipse Bicycle Co. v. Farrow* are strikingly similar to those before us. In that case a bill had been brought upon an agreement to recover royalties. The agreement, so far as pertinent here, recited that Farrow had invented certain improvements pertaining to the mechanism for coasting and braking bicycles, for which he had applied for patents, and that Eclipse Bicycle Co. desired to acquire Farrow's rights "to said inventions as described in the above identified applications, and any letters patent that may

be issued thereon," and that Farrow thereby conveyed to the company all his right, title and interest in "the inventions in bicycles, as fully described and claimed in the applications above referred to," and in letters patent that may be issued thereon. The company agreed to pay royalties "on all the devices made or sold embodying the inventions referred to" and to that end to make returns of the number of devices sold. Finally it was covenanted that in case Farrow "for any reason fails to procure letters patent of the United States for the improvements above referred to, the [company] shall be relieved from the payment of all royalties from and after the date of final adverse action of the Patent Office on the application or applications for patents for said improvements." The bill alleged that soon after the agreement was made, one Morrow, defendant's general manager, applied for a patent on a device in effect the same as Farrow's, that Morrow assigned a half interest therein to the company's president, and that the company began to manufacture and sell the Morrow device. A supplemental bill alleged that upon the sale of Farrow's interest, the company, which had power to do so, failed to prosecute Farrow's applications. As a consequence one of Farrow's applications was abandoned and the other was permitted by the company to lapse. The answer as summarized by the Court admitted the contract, but denied the plaintiff's case, charged him with fraud, and set up that Farrow's invention had been anticipated by another patent, "and that it was impossible to obtain a patent for it, and that, therefore, the defendant was not bound by the contract further."

The Supreme Court held that Farrow could recover on his contract. The real questions in the case, said

the Court (199 U.S. at 586-587), are whether the devices involved "fall within the scope of the contract, and these questions depend more upon a careful construction of that instrument than upon nice discriminations between the patents that were or might have been issued. If either of the contrivances used embodies the invention described in Farrow's applications, then the defendant is bound to account for it by the express terms of its covenant, unless the contract is at an end."

After noting that some of Farrow's claims had been allowed "and there was no such final adverse action of the Patent Office upon either application as a whole as to exonerate the defendant by the terms of which we have recited," the Court continued (199 U.S. at pp. 587-588): "We come back to the construction of the contract. The royalty is to be paid on the 'invention above referred to.' The use of the word 'invention' does not open the state of the prior art and allow the defendant to meet the plaintiff's claim by proving that he had invented nothing new. The royalty is to be paid on the invention described in the specified applications—that is to say, on the contrivances there described—unless and until there is final adverse action by the Patent Office. That is the measure of the defendant's self-protection. It could not have asked or been allowed more. . . . It had all Farrow's interests in its hands, and it took the risk of their worth, except as against what the Patent Office might do. It should be repeated that, so far as the company made any device embodying Farrow's invention, by the fair construction of its express covenant it was bound to account, whether the manufacture was ostensibly Farrow's or not, and he was not left merely to an action for such damages as he could prove."

Saco-Lowell Shops v. Reynolds, 141 F.2d 587, was also an appeal from a decree in a suit to recover royalties under a contract. The contract there licensed the manufacture of "an improved process of cotton roving frame," on which Reynolds as inventor had obtained patents. One question before the court was "whether certain model J roving frames manufactured by defendant are subject to royalties under the licensing contract.".

After holding that these frames were properly held by the trial court "to be covered by the patent and hence subject to the payment of royalties under the contract," the court said (141 F.2d at 596): "The liability of the defendant for royalties, however, is to be determined by the terms of the contract, not by technical considerations of patent law. If the J frames which defendant is manufacturing substantially embody the Reynolds invention, defendant is liable for royalties irrespective of the validity of the claims, so long as they have not been held to be invalid, and irrespective of whether or not certain features of the invention may be found in the prior art. Controlling in this aspect of the case is the decision in *Eclipse Bicycle Co. v. Farrow,* 199 U.S. 581, 586-588, 26 S.Ct. 150, 152, 50 L.Ed. 317."

The further comments of the court in *Saco-Lowell Shops* with reference to the confidential relationship between the parties are also pertinent here. "The liability of defendant here is not to be determined as upon a charge of patent infringement nor even as in the case of an ordinary licensee under contract for the payment of royalties, for the reason that the J frames upon which royalties are claimed embody not only the funda-

by Adkins as to the amount of royalties claimed by Adkins under these provisions for the period from January 1, 1955 to May 31, 1963, as claimed by Adkins. It is significant that the computations of Adkins' accountant were based on Lear's answers to certain interrogatories in which Lear grouped its sales of gyros and of its gyro systems and gyro assemblies, sometimes referred to in the evidence and in the court's instructions as embracing gyro system signals and gyro assembly signals, and that these interrogatories in turn are based on Lear's responses to certain requests for admissions. As to model 2156 the parties stipulated with reference to the amount which would be due for the same period.

As we have pointed out above, the damages awarded by the jury were excessive in that they were not limited to the period from January 1, 1955 to April 8, 1959 when the license agreement was in force. For this reason, if for none other, the trial court was correct in granting the motion for a new trial on the ground that the "damages appearing to have been given under the influence of passion or prejudice" were excessive, and that "the evidence was insufficient to justify the verdict and that the verdict is against law."

Lear's contention that the damages were excessive is based wholly on the testimony of its employee, Vernon Burns. This contention is without merit. Burns' testimony as to what should be included in computing net sales was based on his interpretation of the agreement. In *Ellsworth v. Palmtag,* 168 Cal. 360, 363, it was held that where "questions relating to the contract were framed so that answers would reflect defendant's interpretation of the agreement, rather than the

terms thereof, plaintiff's objections should have been sustained." When this part of Burns' testimony is disregarded, the remainder is consistent with the evidence produced by Adkins.

On its motion for a new trial Lear claimed that the court erred in giving certain instructions and in refusing to give certain other instructions; that it erred in refusing to submit well over a hundred special interrogatories to the jury; and that it erred in its rulings with respect to Adkins' use of a certain exhibit to illustrate his testimony and in failing to properly instruct the jury with respect thereto. All these matters related primarily to the question of the validity of the patent and its coverage of Adkins' invention. In view of our conclusion that the patent as issued was not within the scope of the agreement, and that the validity of the patent was not properly in issue before the trial court, there is no need to extend this opinion with a discussion of these matters.

There was no error in the court's refusal to admit in evidence the three agreements executed by Adkins on September 15, 1955, concurrently with the execution of the license agreement, copies of which were attached to Lear's answer. One of these agreements contained a release "to this date" of all claims by Adkins under his agreement of December 1951 including claims arising out of his employment. The documents were offered as being relevant and material to the issue of liability apart from the license agreement and after termination of that agreement. As we have pointed out, Lear is not liable to Adkins apart from the agreement or for any period of time after its termination.

In our opinion the order granting the new trial must be affirmed and the case remanded for a new trial solely on the issue of the royalties to which Adkins may be entitled for the period from January 1, 1955 to April 8, 1959 under the provisions of the license agreement.

Lear's Cross-Appeal from the Judgment

By reason of our conclusions with respect to the necessity for a new trial on the issue of damages only, the issues raised by Lear's appeal from the judgment have become moot, and the appeal should be dismissed.

Appeals re Dismissal of Second Cause of Action

Adkins' second cause of action, in which he repleads the principal allegations of his first cause of action, is for damages for misappropriation of his "idea and invention for precise alignment of gyroscope gimbal bearings utilizing cemented bearing-receiving elements" which he disclosed to Lear in 1952, and for breach of an implied contract and for unjust enrichment. In his trial brief and during the trial he waived all claims under the second cause of action "except for the invention which is the subject matter of Patent 2,919,586, or for the ideas, or discoveries thereof." During the trial Adkins conceded that his second cause of action had been pleaded in the alternative to the first. Accordingly, without requiring him to make an election, the second cause of action was held in abeyance until it could be determined whether "for some reason the contract fails to cover the invention which Mr. Adkins disclosed to Lear." Still later, although no formal rul-

ing appears in the record, the court effectuated a dismissal of the second cause of action insofar as it had not been waived, by refusing to admit evidence in support of the unwaived allegations.

After the judgment n.o.v. had been entered the trial court denied Adkins' request to amend the judgment "to indicate that the second cause of action was dismissed by the court," stating in the minute order: "Examination of the record reveals that the plaintiff duly waived in open court under the second cause of action; 1. Any and all claims for any ideas, discoveries, or inventions not covered by patent 2,919,586. 2. Any claim for punitive damages. Plaintiff recognized categorically that he was proceeding on one cause of action —an express contract and not an implied contract." In order that it could be determined on appeal from the judgment whether, as a matter of law, Adkins had waived the entire second cause of action, this court, on Adkins' petition for a writ of mandate in Civil No. 28603, held that "the judgment should be amended to show a disposition of the second cause of action." As issued, the writ ordered the trial court to enter an amendment to the judgment in the following terms: "At the outset of the trial, plaintiff John S. Adkins waived all ideas, discoveries and inventions under the second cause of action except for the idea, discovery and invention which is the subject matter of U.S. Patent No. 2,919,586. The Court then required plaintiff to elect between the first and second cause of action, and when plaintiff refused to do so, the Court then dismissed the second cause of action which, after the plaintiff's waiver, remained for the idea, discovery and invention which is the subject matter of U.S. Patent No. 2,919,586, and the same is hereby dismissed." The

trial court complied with this mandate on December 30, 1964.

It is Adkins' position on this appeal that, unless the judgment n.o.v. and the order granting a new trial are reversed (in which event he will have recovered on his primary cause of action), the judgment of dismissal must be reversed and remanded for trial on his second cause of action.

The amendment to the judgment of December 30, 1964, was not erroneous. Adkins' waivers effectively limited his second cause of action to a claim for damages for unjust enrichment by reason of Lear's alleged misappropriation of "the invention which is the subject matter of Patent 2,919,586, or for the ideas, or discoveries thereof." With respect to that invention Adkins' rights are measured exclusively by the patent and by the federal patent laws. To permit Adkins to claim protection of that invention under the common law or any law of this state would be to "give protection of a kind that clashes with the objective of the Federal patent laws." (*Sears, Roebuck & Co. v. Stiffel Co.*, 376 U.S. 225; *Compco Corp. v. Day-Brite Lighting Inc.*, 376 U.S. 234.) It should also be noted that when, as here, a plaintiff relies upon a valid express contract his recovery must rest upon and be measured by its terms, and cannot recover upon the theory of an implied contract. (*Thacker v. American Foundry*, 78 Cal.App.2d 76; *Lemoge Electric v. County of San Mateo*, 46 Cal.2d 659.)

That part of the judgment as amended December 30, 1964, dismissing Adkins' second cause of action must be affirmed.

Adkins' Appeal from Order Apportioning Costs

Adkins has appealed from an order made January 24, 1964, apportioning the costs of an audit of Lear's books (Civ. No. 29770).

The audit involved here was ordered by the court as an aid to Adkins' discovery proceedings designed to ascertain the number of sales of gyros, gyro assemblies and gyro systems manufactured and sold by Lear from January 1, 1955, to the date of Lear's answers to Adkins' interrogatories and the net sales price received by Lear. Lear's first answers to the interrogatories were filed in July 1963. The record reflects extended proceedings before the court, initiated in the main by Adkins, to compel Lear to furnish further information. These proceedings terminated in an order on September 20, 1963, for the audit which was modified after further proceedings on October 18. Under this order the court reserved the power to apportion the costs of the audit. After the audit was completed and further answers to Adkins' interrogatories had been filed the auditors submitted their bill for $17,880. After further hearings the Court on January 24, 1964, made the order appealed from, ordering Adkins to pay 45% of the cost of the audit, and Lear to pay 55%.

On appeal Adkins claims that in apportioning these costs the trail court "abused its discretion, requiring a total reversal of its order." Lear says in reply that there was no abuse of discretion and that, in any event, the order is not appealable.

"The better view is that an order made for the purpose of furthering discovery proceedings, or granting sanctions for refusal to make discovery, is not appealable (*Huenergardt v. Huenergardt,* 218 Cal.App.2d 455, [32 Cal.Rptr. 714]; *Farnham v. Superior Court,* 188 Cal.App.2d 451, 455 [10 Cal.Rptr. 615])." (*Lund v. Superior Court,* 61 Cal.2d 698, 709.)

The appeal from the order apportioning costs of the audit must be dismissed.

In Civ. No. 28624, the judgment non obstante verdicto entered July 15, 1964, is reversed. That part of the minute order of July 2, 1964, granting defendant's motion for judgment n.o.v. with respect to the four "steel" gyros is not appealable, and the appeal therefrom is dismissed. The order of July 2, 1964, denying defendant's motion for judgment n.o.v. with respect to the model 2156 gyro is reversed. The order of July 2, 1964, granting defendant's motion for a new trial is affirmed. The appeal from the judgment entered May 4, 1964, is dismissed.

In Civ. Nos. 30052 and 30089, the judgment as amended December 30, 1964, dismissing plaintiff's second cause of action is affirmed.

In Civ. No. 29770, the appeal from order of January 24, 1964, apportioning the costs of an audit is dismissed.

The case is remanded to the trial court for a new trial solely on the issue of the damages to which plain-

tiff is entitled under the license agreement for the period from January 1, 1955 to April 8, 1959.

In Civ. No. 28624, Adkins shall recover all his costs on his appeal from the judgment notwithstanding the verdict and on Lear's appeals from the order denying in part its motion for a judgment notwithstanding the verdict and from the whole of the judgment entered May 4, 1964.

In Civ. No. 30052, Lear shall recover its costs on appeal.

In Civ. No. 30089, Adkins shall recover his costs on appeal.

In Civ. Nos. 29770 and 30052 Lear shall recover its costs on appeal.

McCoy, *J.**

We concur.

Roth, *P. J.*

Herndon, *J.*

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*Sitting pro tempore under assignment by the Chairman of the Judicial Council.

Modification of Opinion.

In the District Court of Appeal of the State of California, Second Appellate District, Division Two.

John S. Adkins, Plaintiff, Appellant and Cross-Respondent, vs. Lear, Incorporated, Defendant, Respondent and Cross-Appellant. Civ. Nos. 28624, 29770, 30052, 30089.

Filed Sept. 2, 1966.

THE COURT.

The opinion of the court filed August 8, 1966, is modified by deleting therefrom that part beginning in the second line from the bottom of page 23 of the ditto copy with the words "When, as here, the license agreement . . ." to and including the 9th line at the top of page 24, and inserting the following language in lieu thereof:

> "When Lear terminated the license and the license agreement by its letter of April 8, 1959, the license with respect to Exhibit 'B' was non-exclusive by virtue of the provisions of paragraph 11 of the license agreement, Adkins having terminated his employment by Lear in January 1958."

The petitions for rehearing are denied.

Judgment on Verdict in Open Court.

In the Superior Court of the State of California, in and for the County of Los Angeles.

John S. Adkins, Plaintiff, vs. Lear, Incorporated, Defendant. No. 737267.

Filed May 1, 1964.

This action came on regularly for trial on the 9th day of March, 1964, the plaintiff appearing by attorney

Peter Cohen, and the defendant appearing by attorney Edwin Hartz.

A jury of 12 persons was regularly impaneled and sworn to try the action. Witnesses on the part of the plaintiff and the defendant were sworn and examined. After hearing the evidence, the arguments of counsel, and instructions of the Court, the jury retired to consider of their verdict, and subsequently returned into Court, and being called answered to their names and duly rendered their verdict in writing in words and figures as follows, to wit:

"TITLE OF COURT AND CAUSE" We, the jury in the above entitled action, PURSUANT TO THE COURT'S DIRECTION, FIND FOR THE PLAINTIFF ON THE #2156 GYRO IN THE SUM OF $16,351.93.

WE FURTHER FIND FOR THE PLAINTIFF AND AGAINST THE DEFENDANT FOR THE BALANCE OF HIS ACTION IN THE SUM OF $888,122.56

THIS 1ST DAY OF MAY, 1964.

Virgil R. Witt
Foreman

WHEREFORE, by virtue of the law, and by reason of the premises aforesaid, it is ordered, adjudged, and decreed that said PLAINTIFF JOHN S. ADKINS have and recover from said DEFENDANT LEAR, INCORPORATED THE SUM OF $904,474.49, with interest thereon at the rate of seven per cent per annum from the date of the verdict until paid together with costs and disbursements amounting to the sum of $..... ....

[Seal]

Rulings on Motions for Judgment Notwithstanding the Verdict and, in the Alternative, for a New Trial.

Superior Court of the State of California, for the County of Los Angeles.

John S. Adkins, Plaintiff, vs. Lear, Incorporated, Defendant. No. 737 267.

Before the Court are defendant Lear's motions for judgment notwithstanding the verdict and, in the alternative, for a new trial.

The Court directed a verdict for plaintiff for $16,351.93 as royalty under a license agreement for the use of plaintiff's bearing structure as described in patent No. 2-919-586. Defendant's liability for this amount rested upon its status as a licensee. Under the established rule it was estopped to deny the validity of its licensor's patent. Pursuant to the Court's direction, the jury returned the verdict. That portion of the verdict is not now distrubed.

But plaintiff claimed, in addition, that defendant's so-called "Michigan" device was subject to plaintiff's patent under the rule of equivalence. The jury so found and returned a verdict for royalties due in the sum of $888,122.56.

In this phase of the case, the rule of estoppel does not apply. Lear is free to assert that its own device is not covered by plaintiff's patent and, further, that plaintiff's patent is invalid. Otherwise, plaintiff would be in the position of being able to assert estoppel against every product of Lear which plaintiff deemed an equivalent.

Plaintiff twice conceded at the trial that he had no part in designing or inventing defendant's "Michigan" device. Both of the structures involved here were designed by employees of Lear. Each was developed independently: plaintiff's at the Santa Monica, California, plant; defendant's in Michigan. Each was developed within a few weeks of the other. There was no collaboration or joint activity. Plaintiff sought a patent on its device and after protracted prosecution and a personal presentation at Washington, D. C., was granted certain claims. He now asserts that defendant's "Michigan" device is covered by his patent as an equivalent, under claims 9, 13, 14 and 16.

Neither device was put on the public market. Defendant used a limited number of plaintiff's devices as covered by the directed verdict. The "Michigan" device has been used with success in defendant's gyroscopes.

The issues now presented are:

(1) Is plaintiff's patent No. 2-919-586 valid?

(2) Assuming its validity, does it cover defendant's device under the rule of equivalents?

Plaintiff's patent is challenged frontally as a mere aggregation of features old in the art, as lacking invention, being within the skills of any craftsman in the field and long a device in the public domain.

Plaintiff's device is shown diagramatically in sketch "A"; defendant's in sketch "B".

The asserted novelty of plaintiff's invention is the coacting relationship of a pair of surfaces, such as a ball, or a section thereof, nesting in a cone, or a com-

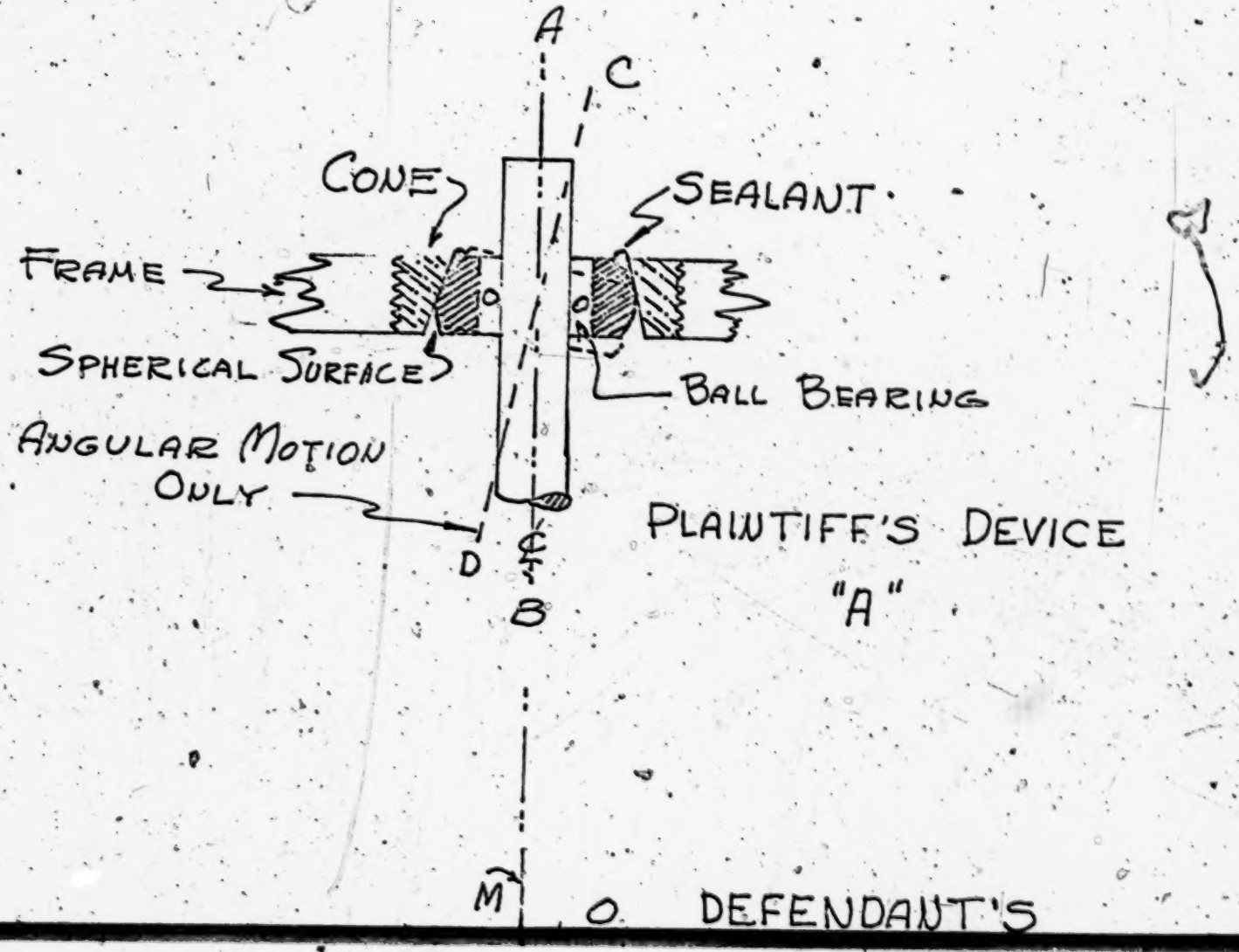
bination of surfaces comprising segments of two spheres. In such a device the inner element is capable of angular movement only.

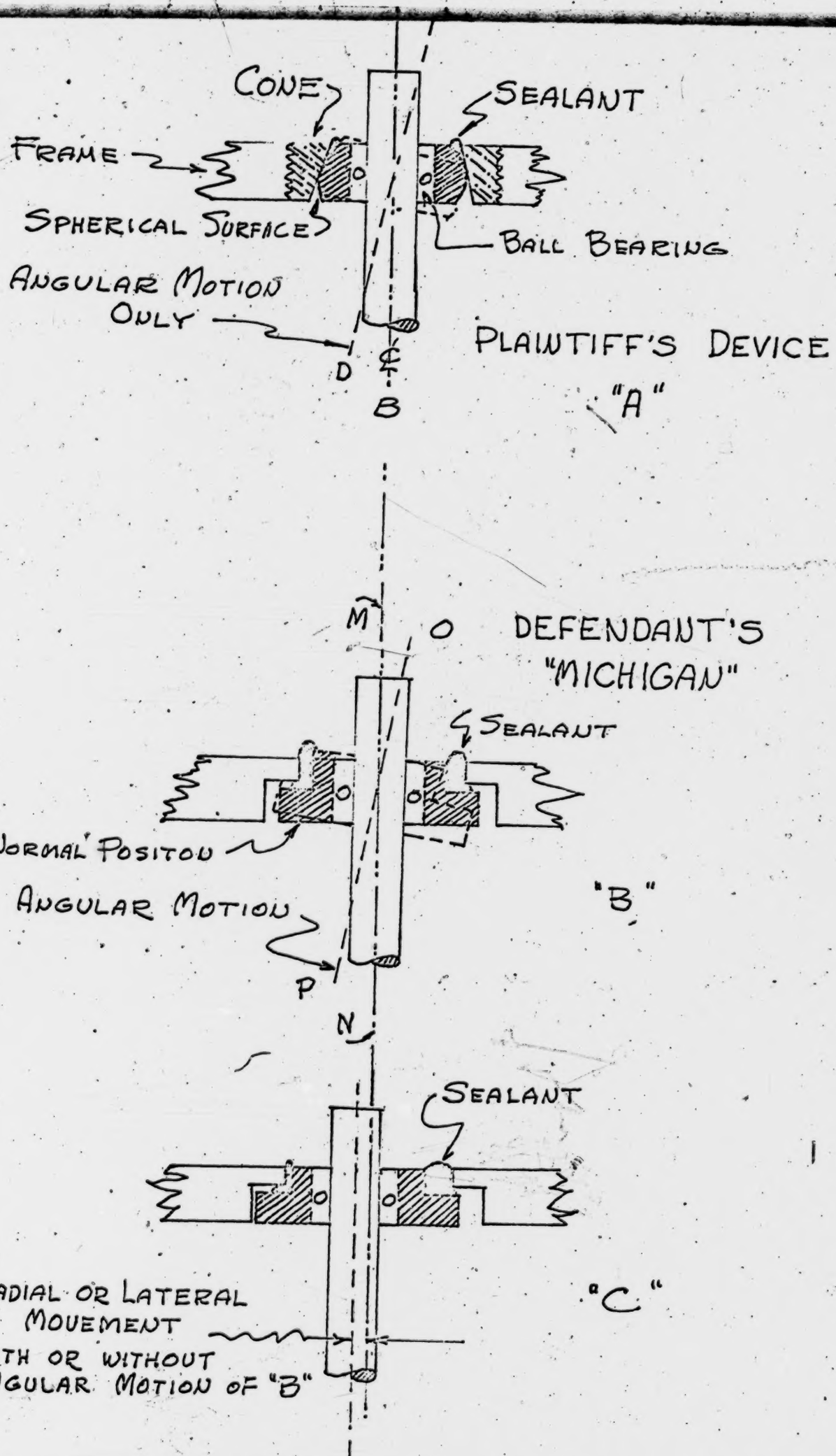
Thus, in sketch "A", it is obvious that the only motion of the shaft A-B is the angular motion shown by a dotted line, such as C-D. No radial motion or adjustment is possible without separating the parts. To lift the ball upward in the cone so that sidewise or radial motion is possible would strip plaintiff's invention of its assigned functions and instead of practicing his invention, plaintiff would be ignoring it. To separate the parts in practice is to admit their inutility.

It is to be noted that in plaintiff's device contact between the inner part, such as a sphere, and the outer part, such as a cone, is limited to a single line of contact. This line of contact is circular if the shaft A-B coincides with the center line of the cone or funnel, otherwise it is an ellipse. There is no surface or area contact between the ball or inner element and plaintiff's cone, irrespective whether the latter is straight or spherical.

When the two bearings of plaintiff's device have been adjusted into place by means of a dummy shaft or mandrel, molten lead or plastic is applied in such manner as to prevent further movement between the cone and the sphere.

In defendant's device there is a cylindrical bearing holder with a flange for mounting in a slightly oversized hole in the frame. It may then be radially adjusted within the limits of the hole. Plastic or molten metal, such as lead, is then poured in the annular space between the bearing-holder and the frame. Angular adjustment may be made in this device as in Schwan's


A
C
CONE
SEALANT
FRAME
SPHERICAL SURFACE
BALL BEARING
ANGULAR MOTION ONLY
D
B
PLAINTIFF'S DEVICE
"A"
M
O
DEFENDANT'S


CONE
SEALANT
FRAME
SPHERICAL SURFACE
BALL BEARING
ANGULAR MOTION ONLY
D
B
PLAINTIFF'S DEVICE
"A"
M
O
DEFENDANT'S
"MICHIGAN"
SEALANT
NORMAL POSITOU
ANGULAR MOTION
P
"B"
N
SEALANT
RADIAL OR LATERAL
MOUEMENT
WITH OR WITHOUT
ANGULAR MOTION OF "B"
"C"

patent, which will be considered later. It may also be achieved simply by withdrawing the bearing-holder flange from the frame and tilting it as required. It is then sealed in place with plastic or molten metal.

The prior art cited in plaintiff's application included, inter alia, the following:

Sperry No. 1-342-397, which discloses a pair of bearings housed in sections of spheres for angular movement.

Carlson No. 2-352-469, wherein the shaft is angularly self-aligning by means of bearing-holders having outer spherical surfaces nesting freely within a cylindrical outer bearing-holder.

Grenat No. 2-531-334 shows a bearing sleeve tapered externally and internally formed to receive the shaft. The tapered sleeve fits into a hole in the frame and is adjustable angularly only. It is fixed in position by filling the annular space between the sleeve and the frame with a quick setting material such as Babbitt. The cone contacts the frame in a line only, and as in plaintiff's device this line forms a circle or an ellipse according to the position of the shaft. In simple form this device anticipates every feature of plaintiff's. Plaintiff evidently thought so, too, and purchased this patent.

Not cited by the Patent Office are the following significant patents:

Schwan No. 2-704-693 discloses a complete anticipation of the defendant's "Michigan" bearing. It shows a ball bearing, an element for holding said bearing—and an annular space between the bearing and the frame to provide for radial adjustment. All the claims are specific to radial adjustment of the bearing-holder.

It will be apparent at once that to the extent that either bearing in Schwan is moved radially in one direction and the other is moved less, or in any other direction, that an *angular* movement of the shaft has occurred at each bearing.

Moody No. 2-530-533 reveals a precise configuration of defendant's device—bearing sleeve—flanged bearing-holder and housing. Add only a slightly oversized hole to permit adjustment and to secure the bearing and defendant's "Michigan" device is precisely and completely anticipated. Drilling an oversized hole and filling the annular space with plastic does not involve invention.

Herr No. 2-633-544 shows a conically tipped shaft rotating in a self-aligning hemispherical bearing, nesting in a cone in the same manner as plaintiff's. The bearings are free to adjust themselves to the axis of rotation precisely in the manner of plaintiff's.

No invention would be involved in substituting the sleeve or ball bearing for the conical bearing or soldering in lieu of screw joints. This patent is a complete anticipation of plaintiff. It would be well within the skills of a mechanic to make plaintiff's device from the teachings of Herr alone.

In summary, defendant's "Michigan" device differs from plaintiff's in these particulars:

1. It may be adjusted radially after assembly. In contrast plaintiff's device has no radial motion whatever.

2. It may be adjusted angularly by tilting the shaft and bearings since contact between the bearing-holder and the supporting frame is not necessary.

3. Contact between the bearing-holder and the frame is a flat area of any desired size.

4. The bearing-holder is fixed in position directly to the frame. No intermediate member, such as plaintiff's cone, is required. This alone is a patentable distinction.

With the two devices now in focus, the prior art cited forces the question:

Was any patentable invention involved in plaintiff's patented device, or was it merely an aggregation of old parts and elements performing no new or different function?

This is purely a question of law. (*Bergman vs. Aluminum Lock,* Ninth Circuit, 1958—251 Fed. 2d 801; *Monroe Auto vs. Superior Industries, Inc.,* Ninth Circuit, May 22, 1964; U.S. Court of Appeals 141 U.S. Pat. Quarterly 710).

Neither device at bar represents or involves the inventive concept; neither has brought to light what lay hidden or created something which had not before existed. Neither device can be distinguished from the results of simple mechanical skill. A patent cannot be sustained when its effect is merely to subtract from former resources freely available to skilled artisans. (*Kwikset Locks vs. Hilgren,* Ninth Circuit Appeals, 1954—210 Fed. 2d 483.)

The prior art, as disclosed by the patents cited above, dissipate any presumption of validity in the case at bar. "The existence of but one pertinent example of unconsidered prior art is not only sufficient basis to dissipate the presumption of validity, but may render the patent invalid". (*Monroe Auto vs. Superior,* supra.)

In *Great Atlantic & Pacific Tea Co., vs. Supermarket Equipment, etc.,* 340 US 147, the Supreme Court said: "The standard of patentability is a Constitutional standard; *and the question of validity of a patent is a question of law.* (Italics added). The Court fashioned in *Graver Tank & Mfg. Co. v. Linde Air Products Co.,* 336 US 271. . . . a rule for patent cases to the effect that this Court will not disturb a finding of invention made by two lower Courts, in absence of a further obvious and exceptional showing of error. That rule, imported from other fields, never had a place in patent law. Having served its purpose in *Graver Tank & Mfg. Co. vs. Linde Air Products Co.,* it is now in substance rejected. The Court now recognizes what has long been apparent in our cases; that it is the 'standard of invention' that controls. That is present in every case where the validity of a patent is in issue. It is that question which the Court must decide. No 'finding of fact' can be a substitute for it in any case. The question of invention goes back to the Constitutional standard in every case. We speak with final authority on this Constitutional issue as we do on many others.

"Courts should scrutinize combination patent claims with a care proportioned to the difficulty and improbability of finding invention in an assembly of old elements.

"This patentee has added nothing to the total stock of knowledge, but has merely brought together segments of prior art and claims them in congregation as a monopoly."

In a concurring opinion Douglas and Black, JJ., pointed out that the Constitution does not sanction the patenting of gadgets.

Under the current rule in the federal courts, a holding of invalidity ordinarily renders moot any question of infringement or as more accurately stated in relation to the case at bar, a question of equivalence.

But it seems desirable, nevertheless, to dispose completely and separately of all issues raised.

Defendant's "Michigan" device represents even less an advance over the prior art than plaintiff's. The teachings of Schwan and Moody are so obvious that little further need be said to dispose of the matter.

It is sufficient to point out that a dunderhead, oversizing ever so little the bearing holes in Moody's patent, or using Schwan's bearing as it is, would come up with precisely the device manufactured by Lear.

Plaintiff also claims as an equivalent the so-called Tippy Washer used by defendant in some of its models. It is as well known in the crafts as an ordinary

washer or a nut or bolt. It is a flat, metal washer with slight humps diametrically placed on the periphery. This permits small angular movements of a shoulder shaft. In defendant's application the washer was also shiftable in a radial direction. Clearly, neither plaintiff's claims nor his assertion of equivalency cover the Tippy Washer.

Since, as a matter of law, neither of defendant's devices could be the subject of a valid patent to anyone, it follows that plaintiff cannot claim them as equivalents under or as infringing his patent (even if valid).

The motion for judgment notwithstanding the verdict is granted in part, namely, the directed verdict for plaintiff for $16,351.93 shall stand, but the balance of the verdict for plaintiff and against defendant is set aside and a judgment in lieu thereof is entered against plaintiff and for defendant.

Dated July 2nd, 1964.

/s/ Brodie Ahlport
Judge of the Superior Court

Ruling on Motion for a New Trial.

Defendant moved for a new trial in the alternative to an order for a judgment for defendant notwithstanding the verdict, and assigned as grounds therefor:

1. Irregularity in the proceedings on the part of plaintiff by which defendant was prevented from having a fair trial.

2. Excessive damages appearing to have been given under the influence of passion or prejudice.

3. Insufficiency of the evidence to justify the verdict, or that it is against law.

4. Errors in law, occurring at the trial and excepted to by the defendant.

Defendant's foregoing motion is granted on and as to each and all of the grounds specified. Further, the Court finds specifically that the evidence was insufficient to justify the verdict and that the verdict is against law, and grants a new trial on each of said grounds.

Dated July 2nd, 1964.

/s/ Brodie Ahlport
Judge of the Superior Court

Part of and attached to Ruling on Motion for Judgment notwithstanding the verdict and for new trial in *Adkins vs. Lear*, No. 737 267.

Judgment for Defendant Notwithstanding the Verdict.

Entered, William G. Sharp, County Clerk, July 15, 1964. Book 5092, Page 018. G. C. Ericsson.

Filed July 10, 1964. William G. Sharp, County Clerk.

By D. Brownfield, Deputy.

Superior Court of the State of California, for the County of Los Angeles.

John S. Adkins, Plaintiff, v. Lear, Incorporated, etc., et al., Defendants. No. 737 267.

The motion of defendant Lear, Incorporated for a judgment for defendant notwithstanding the verdict having heretofore been submitted is granted in part for the reasons set forth in the "Ruling on Motions for Judgment Notwithstanding the Verdict and in the alternative for a new trial" and:

1. That part of the judgment for plaintiff John S. Adkins in the amount of $888,122.56 entered on the verdict on May 4, 1964 in Book 5033 at Page 47 is set aside and vacated and judgment for defendant Lear, Incorporated entered thereon notwithstanding the verdict.

2. That part of the judgment for plaintiff in the amount of $16,351.93 entered on the directed verdict on May 4, 1964 at said book and page is not affected hereby in any way or at all and shall stand as entered.

Dated: July 10, 1964.

/s/ Brodie Ahlport
Judge of the Superior Court

[Seal]

Amendment to Judgment.

Superior Court of the State of California, for the County of Los Angeles.

John S. Adkins, Plaintiff, vs. Lear, Incorporated, et al., Defendants. No. 737-267.

Filed Dec. 30, 1964.

The judgment in the above entitled action entered on May 4, 1964, in Judgment Book 5033 at Page 47, is hereby amended as follows:

> "At the outset of the trial, plaintiff John S. Adkins waived all ideas, discoveries and inventions under the second cause of action except for the idea, discovery and invention which is the subject matter of U.S. Patent No. 2,919,586. The Court then required plaintiff to elect between the first and second cause of action, and when plaintiff refused to do so, the Court then dismissed the second cause of action which, after the plaintiff's waiver, remained for the idea, discovery and invention which is the subject matter of U.S. Patent No. 2,919,586, and the same is hereby dismissed."

Dated: December 30, 1964.

Brodie Ahlport
Judge of the Superior Court

The Document to which this Certificate is attached is a full, true and correct copy of the original on file and of record in my office.

Attest February 16, 1965. WILLIAM G. SHARP County Clerk and Clerk of the Superior Court of the State of California, in and for the County of Los Angeles.

By R. K. Pachy
Deputy

Opinion of the Ninth Circuit Court of Appeals.

United States Court of Appeals for the Ninth Circuit.

Lear Siegler, Inc., a corporation, *Appellant,* vs. John S. Adkins, *Appellee.* No. 18,634.

[April 6, 1964]

Appeal from the United States District Court for the Southern District of California, Central Division.

Before: Madden, Judge, Court of Claims, Browning and Duniway, Circuit Judges

This action was filed in the trial court on March 1, 1963. On April 9, 1963, pursuant to a motion made by the defendant Adkins, the court entered the following order:

> "IT IS ORDERED that the Motion of the Defendant to Stay all Further Proceedings herein until final adjudication in that certain action now pending between the same parties hereto in the Superior Court of the County of Los Angeles, entitled JOHN S. ADKINS, plaintiff v. LEAR, INCORPORATED, ET AL., Defendants, being Case No. 737,267 therein, is hereby granted.
>
> "The Court finds that this Order involves a controlling question of law as to which there is ground for difference of opinion and that an immediate appeal from this order may materially advance the ultimate termination of the litigation."

Plaintiff Lear Siegler, Inc. (Lear) appeals. Pursuant to the provisions of 28 U.S.C. §1292(b), it applied to us for permission to appeal, and on April 25 we granted leave to appeal for the purpose of permitting

argument before this court and review of the following questions:

> "1. Whether an order for a stay is the type or kind of order which could or does involve a controlling question of law within the meaning of §1292(b) of Title 28 U.S.C.?
>
> "2. Whether, in case said question No. 1 is answered in the affirmative, the district court was in error or abused its discretion in granting the said order for stay?
>
> "3. Whether, in case it be determined that this appeal could not properly be maintained because of a negative answer to the first question above stated, this court may nevertheless consider and treat the application presented to us as an application for writ of mandamus. Cf. Mach-Tronics, No. 18,349, (April 1, 1963) [*Mach-Tronics, Inc. v. Zirpoli*, 316 F.2d 820]"

Lear contends that the order is appealable under both subsection (a) and (b) of 28 U.S.C. §1292, and further contends that if we should hold that it is not, we should treat the appeal as an application for a writ of mandamus and issue a writ directing the trial court to vacate its order and proceed with the action. Appellee asserts that the order is not appealable, but concurs with Lear in urging us, if we think it is not appealable, to treat the appeal as an application for a writ of mandamus. On the merits, Lear asserts that the district court abused its discretion in granting the order, and appellee asserts that the order falls within the court's discretion, which was not abused.

In its complaint in the district court, Lear alleges that appellee owns United States Letters Patent No.

2,919,586 issued on January 5, 1960 and entitled "Gyroscope." It also asserts that since that date Lear has been manufacturing various models of gyroscopes, and that appellee asserts that in doing so Lear is infringing the patent and has demanded that Lear pay him royalties. Lear then proceeds to list some 16 reasons why it claims that the patent is invalid and to state various reasons why the gyroscopes that it manufactures do not infringe the patent if it is valid. The prayer is for a judgment decreeing that the patent is invalid and void and is not infringed by Lear, and that in demanding royalties, appellee is misusing the patent. There is a further prayer for an injunction.

Jurisdiction is not based upon diversity of citizenship, but upon the patent laws of the United States and 28 U.S.C. §1338(a) which reads:

> "The district court shall have original jurisdiction of any civil action arising under any Act of Congress relating to patents, copyrights and trademarks. Such jurisdiction shall be exclusive of the courts of the states in patent and copyright cases."

The remedy sought is declaratory relief and an injunction under 28 U.S.C. §§2201 and 2202.

Appellee's motion for stay of all further proceedings was based upon the fact that, on January 5, 1960, appellee had filed in the Superior Court of the State of California, in and for the County of Los Angeles the action referred to in the district judge's order, quoted above. A copy of the complaint and of Lear's answer in the state court action are attached to the affidavit of appellee upon which the motion was based. The complaint's allegations are as follows: On December

29, 1951, appellee and Lear entered into a written agreement in connection with appellee's employment by Lear under which all new ideas, discoveries, inventions, etc. relating to "vertical gyroscopes" were to become the property of appellee and to be licensed to Lear. On September 15, 1955 the parties entered into a detailed written agreement, a copy of which is attached to the complaint, under which Lear agreed to pay appellee certain royalties. Both during and prior to appellee's employment by Lear, appellee conceived, created and devised the inventions, ideas and discoveries referred to in the agreement and made them available to Lear. Beginning on or about September 10, 1957, Lear breached the agreement in numerous respects, including principally failure to pay royalties. Under date of April 8, 1959 Lear purported to terminate the agreement, but is nevertheless continuing to manufacture the products for which royalties are to be paid and refusing to pay the royalties. Additional damages will be incurred in the future. There is a second cause of action in which it is charged in substance that during the period of appellee's employment with Lear, Lear became familiar with his discoveries and inventions, that there was a confidential relationship between the parties and that Lear has appropriated the inventions but refused to pay for them. General damages in the sum of $100,000 are sought under the first cause of action, and in the sum of $250,000 under the second cause of action, which also asks for $250,000 exemplary damages.

The agreement of September 15, 1955 was not mentioned by Lear in the complaint filed by it in the district court. The agreement recites that appellee owns Letters Patent No. 2,542,975 relating to vertical gyro-

scopes and that he is also an owner of the inventions disclosed in a pending application for a United States patent on gyroscopes. Appellee's affidavit alleges that a patent, No. 2,919,586, was issued pursuant to this application on January 5, 1960. The agreement further recites that appellee is the owner of an invention relating to a "no gimbal lock feature for a gyroscope". The purpose of the agreement was to give Lear a non-exclusive license under patent No. 2,452,975 and an exclusive license under any and all applications for patents, and patents, claiming the subject matter referred to in the agreement but for which patents had not yet issued. The agreement grants such licenses, but, as to unissued patents, is limited to such claims or inventions as are patented or patentable by appellee. In the portion of the agreement that grants the licenses there appears this statement: "Lear shall have the right on 90 days' prior written notice to Adkins, to terminate any one or more of the licenses herein granted." There is also a provision permitting Lear to terminate if the patent office refused to issue a patent on the substantial claims of the application described in the agreement. In its answer filed in the state court Lear asserts that it did terminate the agreement on April 8, 1959, pursuant to these provisions.

1. *The order is appealable.*

We need not pass upon appellant's contention that the order is appealable under subsection (a)(1) of §1292 because we are of the opinion that it is appealable under subsection (b) of that section, which reads as follows:

> "(b) When a district judge, in making in a civil action an order not otherwise appealable under this section, shall be of the opinion that such order in-

> volves a controlling question of law as to which there is substantial ground for difference of opinion and that an immediate appeal from the order may materially advance the ultimate termination of the litigation, he shall so state in writing in such order. The Court of Appeals may thereupon, in its discretion, permit an appeal to be taken from such order, if application is made to it within ten days after the entry of the order. . . ."

We think the court's order, quoted above, is a sufficient compliance with the statute, which expressly covers interlocutory orders not otherwise appealable. The controlling question of law here involved is whether the district court was in error or abused its discretion in granting the stay. Our examination of the briefs and authorities leads us to the conclusion that the district judge was correct in his opinion that the question of law is one "as to which there is substantial ground for difference of opinion." Certainly it cannot be said that he was wrong in thinking that an immediate appeal may materially advance the ultimate termination of the litigation. His order stays all further proceedings until final adjudication in the pending state court action. That action has been pending since January 1960 and had not yet gone to trial at the time that the district judge made his order, although appellee said that it was to go to trial soon. While the order remains in effect there will be no further proceedings in this action. On the other hand, if the appeal were successful, the district court would be compelled to proceed with the action. Thus a reversal might materially advance the ultimate termination of the litigation, (i.e., the action in the district court).

We think that the requirements of subsection (b) of §1292 are met.

We agree with those courts that have held that the procedure authorized in subsection (b) should be used sparingly and with discrimination.[1] But we also think that to allow the appeal in this case comports with that policy. It therefore is unnecessary for us to decide whether to treat the appeal as an application for a writ of mandamus.[2]

2. *The district court did not err or abuse its discretion in granting a stay.*

We have no doubt that the district court had jurisdiction of the action before it. Lear's purpose in filing the action was to test the validity of appellee's patent and to establish that what Lear is doing does not infringe the patent if it is valid. This is certainly a question arising "under any act of Congress relating to patents" within the meaning of 28 U.S.C. §1338. The fact that this is not the usual action to enforce a patent, charging infringement, does not mean that the court does not have jurisdiction. The Federal Declaratory Judgments Act (28 U.S.C. §§2201-2202) gives a new remedy, and there is no doubt that that remedy is applicable in patent cases. *Crowell v. Baker Oil Tools, Inc.*, 9 Cir., 1944, 143 F.2d 1003. This, however, does not dispose of the matter.

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[1] *Gottesman v. General Motors Corp.*, 2 Cir., 1959, 268 F.2d 194; *In re Heddendorf*, 1 Cir., 1959, 263 F.2d 887; *Melbert v. Bison Labs, Inc.*, 3 Cir. 1958, 260 F.2d 431.

[2] See: *Steccone v. Morse-Starrett Prods. Co.*, 9 Cir., 1951, 191 F.2d 197; *Shapiro v. Bonanza Hotel Co.*, 9 Cir., 1950, 185 F.2d 777.

The Federal Declaratory Judgments Act does not establish a new basis for jurisdiction in the federal courts; it merely establishes a new remedy, available in cases in which jurisdiction otherwise exists. *Skelly Oil Co. v. Phillips Petroleum Co.*, 1950, 339 U.S. 667, 671. Moreover, the existence of jurisdiction in an action for declaratory relief does not require that the court exercise it. It has a judicial discretion to decline to grant such relief. This has been the consistent position of the Supreme Court, the latest decision being *Public Affairs Press v. Rickover*, 1960, 369 U.S. 111. In that case in its per curiam opinion the Court said:

> "The Declaratory Judgment Act was an authorization, not a command. It gave the federal courts competence to make a declaration of rights; it did not impose a duty to do so. *Brillhart v. Excess Ins. Co.*, 316 U.S. 491, 494, 499; *Great Lakes Co. v. Huffman*, 319 U.S. 293, 299-300; *Federation of Labor v. McAdory*, 325 U.S. 450, 462; *Mechling Barge Lines v. United States*, 368 U.S. 324, 331. Of course a District Court cannot decline to entertain such an action as a matter of whim or personal disinclination. 'A declaratory judgment, like other forms of equitable relief, should be granted only as a matter of judicial discretion, exercised in the public interest.' *Eccles v. Peoples Bank*, 333 U.S. 426, 431." (p. 112)

Other cases to the same effect are *Kerotest Mfg. Co. v. C-O-Two Fire Equip. Co.*, 1952, 342 U.S. 180, 183-5; *Public Serv. Comm'n v. Wycoff Co.*, 1952, 344 U.S. 237, 241, 243-4, 248.

Many of the Supreme Court decisions have involved the doctrine of abstention, and have refused to permit

the declaratory judgment remedy to be used as a means of circumventing the normal rule that state procedures relating to public matters such as taxation, the regulation of utilities, etc., must be followed before resort is had to the federal courts. Others, however, have applied these principles in private litigation; *Brillhart v. Excess Ins. Co., supra* (involving state-federal conflict); *Kerotest Mfg. Co. v. C-O-Two Fire Equip. Co., supra,* (involving conflict between two federal courts).

Long before the enactment of the Federal Declaratory Judgments Act the Supreme Court had established two correlative rules relating to jurisdiction in patent matters. The first is that a case is within the exclusive federal jurisdiction when it seeks to enforce a patent against an infringer, even though the complaint may show, in anticipation of a defense, the existence of an agreement between the parties relating to the patent. The second is that if the suit is to enforce or to revoke a patent licensing or other similar agreement, it "is not a suit under the patent laws of the United States, and cannot be maintained in a federal court as such." (*Luckett v. Delpark, Inc.,* 1926, 270 U.S. 496, 502, 510; see also *Becher v. Contoure Labs. Inc.,* 1929, 279 U.S. 388; *Pratt v. Paris Gas Light & Coke Co.,* 1897, 168 U.S. 255). It follows, and the Court has held, in *Pratt* and in *Becher,* that in an action in a state court based upon such an agreement, the state court can, where it becomes necessary for it to do so in order to decide the case before it, pass upon the meaning, the scope, the validity, or the infringement of the patent. As the Court said in *Pratt:* "Section 711[3] does not

[3]Rev. Stat. §711: ". . . the jurisdiction vested in the courts of the United States, in the cases and proceedings hereinafter men-

deprive the state courts of the power to determine *questions* arising under the patent laws, but only of assuming jurisdiction of *'cases'* arising under those laws." (168 U.S. at 259) We have referred to these principles in *H. J. Heinz Co. v. Owens*, 9 Cir., 1951, 189 F.2d 505, n. 5. See also *MacGregor v. Westinghouse Co.*, 1947, 329 U.S. 402, 407-8.

Until the enactment of the Federal Declaratory Judgments Act, a party charged with infringement of a patent usually could not initiate an action in a federal court, absent some other ground of federal jurisdiction. There then existed no remedy whereby he could obtain a judgment in the federal court. He could await, and then defend, the filing by the patent holder of a suit for infringement in the federal court. Or, if a contract existed between him and the patent holder, and he claimed, as Lear does here, that the patent was invalid, or that he was not using it, he might have a remedy, by way of enforcement of rescission or other relief, upon the contract in a state court.

The Federal Declaratory Judgments Act affords a new remedy, whereby one charged with infringement can initiate an action in the federal court. This creates possibilities of conflict between the federal court and a state court whenever there is a contract between the parties relating to the patent, and the patent holder has brought an action in the state court based upon the contract. It is not only in patent cases that the Federal Declaratory Judgments Act has opened up such possibilities of conflict, and it is in cases involving such

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tioned, shall be exclusive of the courts of the several States . . . Fifth. Of all cases arising under the patent-right . . . laws of the United States."

possibilities of conflict that the courts have upheld the exercise by a federal court of its discretion to withhold declaratory judgment pending decision of the state court action.

The nature of the problem is well stated by Mr. Justice Jackson in *Public Serv. Comm'n v. Wycoff Co., supra:*

> "In this case, as in many actions for declaratory judgment, the realistic position of the parties is reversed. The plaintiff is seeking to establish a defense against a cause of action which the declaratory defendant may assert in the Utah courts. Respondent here has sought to ward off possible action by the petitioners by seeking a declaratory judgment to the effect that he will have a good defense when and if that cause of action is asserted. Where the complaint in an action for declaratory judgment seeks in essence to assert a defense to an impending or threatened state court action, it is the character of the threatened action, and not of the defense, which will determine whether there is federal-question jurisdiction in the District Court. If the cause of action, which the declaratory defendant threatens to assert, does not itself involve a claim under federal law, it is doubtful if a federal court may entertain an action for a declaratory judgment establishing a defense to that claim. This is dubious even though the declaratory complaint sets forth a claim of federal right, if that right is in reality in the nature of a defense to a threatened cause of action. Federal courts will not seize litigations from state courts merely because one, normally a defendant,

> goes to federal court to begin his federal-law defense before the state court begins the case under state law. *Tennessee v. Union & Planters' Bank*, 152 U.S. 454; *The Fair v. Kohler Die & Specialty Co.*, 228 U.S. 22; *Taylor v. Anderson*, 234 U.S. 74."

Brillhart v. Excess Ins. Co., supra, was an action in which jurisdiction was founded upon diversity of citizenship, brought by an insurance company to determine whether the company was liable to certain parties by reason of certain matters pending in a state court. The Supreme Court held that, if the question could be determined in the state litigation, the District Court had discretion to withhold declaratory relief. *Kerotest Mfg. Co. v. C-O-Two Fire Equip. Co., supra,* involved the staying of a declaratory judgment action in one district court, because of the pendency of an infringement suit in another. In affirming, Mr. Justice Frankfurter said:

> "The manufacturer who is charged with infringing a patent cannot stretch the Federal Declaratory Judgments Act to give him a paramount right to choose the forum for trying out questions of infringement and validity. He is given an equal start in the race to the courthouse, not a head-start." (342 U.S. at 183)

We think that these principles are applicable here. Lear asserts that questions as to the validity or infringement of appellee's patent are within the exclusive jurisdiction of the federal courts and therefore could not be passed upon in the state litigation. As we have already shown, the law is to the contrary.

Lear also asserts that by reason of its termination of the licensing agreement between it and appellee pursuant to the terms of that agreement, appellee cannot require it to pay royalties under the terms of the agreement.[4] It further claims that, by reason of this termination, the normal rule under which it would be estopped to deny the validity of the patent does not apply.[5] It says, too, that under the terms of the agreement it agreed to accept the license only for those inventions that proved to be within the terms of appellee's patent application and actually patentable, and that the products that it makes do not fall within these terms. As we see it, the difficulty with all of these contentions of Lear is that they are precisely the issues which are pending in the state court, and that the state court will, if necessary, decide them.[6]

It seems to us quite clear that what Lear is trying to do flies in the face of the principles discussed above and applied by us in the *H. J. Heinz Company* case, *supra*. As we there said:

> "Procedurally, this is also a suit for a declaratory judgment as to the scope, validity and infringement of a patent. But in essential character and purpose it is something else.
>
> "An outstanding decree of a state court prohibits Heinz from making or using vinegar genera-

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[4]Compare *Miehle Printing Press & Mfg. Co. v. Publication Corporation*, 7 Cir., 1948, 166 F.2d 615 with *Seagren v. Smith*, Cal. D.C.A., 1944, 147 P.2d 682. We express no opinion as to the validity of Lear's assertion.

[5]Compare *Bowers Manufacturing Co. v. All-Steel Equip. Inc.*, 9 Cir., 1960, 275 F.2d 809 with *Stimpson Computing Scale Co. v. W. F. Stimpson Co.*, 6 Cir., 1900, 104 Fed. 893. Again, we express no opinion as to the validity of Lear's assertion.

[6]See *Rogers v. Hensley*, Cal. D.C.A., 1961, 14 Cal. Rptr. 870.

tors which are covered by the Owens patent. The present complaint admits on its face that the only controversy between the parties is that created by the action of Owens in petitioning the state court to adjudge Heinze in contempt of that decree. And, acting upon that petition before the complaint in this suit was filed, the state court had ordered Heinz to show cause why it should not be adjudged in contempt. Apparently, that matter now awaits final disposition on the merits of the contempt charge."

. . .

"In these circumstances, we think that both the chronology and the subject matter of the litigation in state and federal courts require the conclusion that the present suit is a device to bring within federal jurisdiction the very controversy, litigated and in litigation in the state court." (189 F.2d at 508)

In that decision we also quoted the Court of Appeals for the 7th Circuit in *American Auto. Ins. Co. v. Freundt*, 1939, 103 F.2d 613, 617 as follows:

"The wholesome purposes of declaratory acts would be aborted by its use as an instrument of procedural fencing either to secure delay or to choose a forum. It was not intended by the act to enable a party to obtain a change of tribunal and thus accomplish in a particular case what could not be accomplished under the removal act, and such would be the result in the instant case."

Compare *Shell Oil Co. v. Frusetta*, 9 Cir., 1961, 290 F.2d 689.

The authorities upon which Lear relies are not in point. They involve actions in which the district court is without discretion to decline to exercise its jurisdiction, such as actions under the antitrust laws (*Lyons v. Westinghouse Elec. Corp.*, 2 Cir., 1955, 222 F.2d 184; *Mach-Tronics, Inc. v. Zirpoli*, 9 Cir., 1963, 316 F.2d 820), or the Trading with the Enemy Act (*Propper v. Clark*, 1949, 337 U.S. 472).

We hold that in this declaratory judgment action the district court had discretion to grant the stay that it granted and did not abuse its discretion in so doing.

Affirmed.

APPENDIX B.

Provisions of the Constitution of the United States.

The Constitution of the United States of America, Article I, § 8,

> Clause 8 [The Congress shall have Power . . .] to promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.

Statutory Provisions Title 35 of the United States Code.

§ 101. *Inventions patentable*

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

§102. *Conditions for patentability; novelty and loss of right to patent*

A person shall be entitled to a patent unless—

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, or

§ 103. *Conditions for patentability; non-obvious subject matter*

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

§ *115. Oath of applicant*

The applicant shall make oath that he believes himself to be the original and first inventor of the process, machine, manufacture, or composition of matter, or improvement thereof, for which he solicits a patent; and shall state of what country he is a citizen. Such oath may be made before any person within the United States authorized by law to administer oaths, or, when made in a foreign country, before any diplomatic or consular officer of the United States authorized to administer oaths, or before any officer having an official seal and authorized to administer oaths in the foreign country in which the applicant may be, whose authority shall be proved by certificate of a diplomatic or consular officer of the United States, and such oath shall be valid if it complies with the laws of the state or country where made. When the application is made as provided in this title by a person other than the inventor, the oath may be so varied in form that it can be made by him.

§ *132. Notice of rejection; reexamination*

Whenever, on examination, any claim for a patent is rejected, or any objection or requirement made, the Commissioner shall notify the applicant thereof, stating the reasons for such rejection, or objection or requirement, together with such information and references as may be useful in judging of the propriety of continuing the prosecution of his application; and if after receiving such notice, the applicant persists in his claim for a patent, with or without amendment, the application shall be reexamined. No amendment shall introduce new matter into the disclosure of the invention.

§ *154 Contents and term of patent*

Every patent shall contain a short title of the invention and a grant to the patentee, his heirs or assigns, for the term of seventeen years, subject to the payment of issue fees as provided for in this title, of the right to exclude others from making, using, or selling the invention throughout the United States, referring to the specification for the particulars thereof. A copy of the specification and drawings shall be annexed to the patent and be a part thereof.

§ 282. *Presumption of validity; defenses*

A patent shall be presumed valid. Each claim of a patent (whether in independent or dependent form) shall be presumed valid independently of the validity of other claims; dependent claims shall be presumed valid even though dependent upon an invalid claim. The burden of establishing invalidity of a patent or any claim thereof shall rest on the party asserting it.

The following shall be defenses in any action involving the validity or infringement of a patent and shall be pleaded:

(1) Noninfringement, absence of liability for infringement, or unenforceability,

(2) Invalidity of the patent or any claim in suit on any ground specified in part II of this title as a condition for patentability,

(3) Invalidity of the patent or any claim in suit for failure to comply with any requirement of sections 112 or 251 of this title,

(4) Any other fact or act made a defense by this title.

In actions involving the validity or infringement of a patent the party asserting invalidity or noninfringement shall give notice in the pleadings or otherwise in writing to the adverse party at least thirty days before the trial, of the country, number, date, and name of the patentee of any patent, the title, date, and page numbers of any publication to be relied upon as anticipation of the patent in suit or, except in actions in the United States Court of Claims, as showing the state of the art, and the name and address of any person who may be relied upon as the prior inventor or as having prior knowledge of or as having previously used or offered for sale the invention of the patent in suit. In the absence of such notice proof of the said matters may not be made at the trial except on such terms as the court requires.

28 *U.S.C. 1498. Patent Cases.* (a) Whenever an invention described in and covered by a patent of the United States is used or manufactured by or for the United States without license of the owner thereof or lawful

right to use or manufacture the same, the owner's remedy shall be by action against the United States in the Court of Claims for the recovery of his reasonable and entire compensation for such use and manufacture.

For the purposes of this section, the use or manufacture of an invention described in and covered by a patent of the United States by a contractor, a subcontractor, or any person, firm, or corporation for the Government and with the authorization or consent of the Government, shall be construed as use or manufacture for the United States.

The court shall not award compensation under this section if the claim is based on the use or manufacture by or for the United States of any article owned, leased, used by, or in the possession of the United States prior to July 1, 1918.

A Government employee shall have the right to bring suit against the Government under this section except where he was in a position to order, influence, or induce use of the invention by the Government. This section shall not confer a right of action on any patentee or any assignee of such patentee with respect to any invention discovered or invented by a person while in the employment or service of the United States, where the invention was related to the official functions of the employee, in cases in which such functions included research and development, or in the making of which Government time, materials or facilities were used.

15 *U.S.C.* § 1

Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is declared to be illegal: . . . .

APPENDIX C.

Agreement.

THIS AGREEMENT, made and entered into this 15th day of Sept. 1955, by and between JOHN S. ADKINS of Santa Monica, California, hereinafter referred to as "Adkins" and LEAR, INCORPORATED, a corporation of Illinois, hereinafter referred to as "Lear."

WITNESSETH:

(A) WHEREAS, Adkins represents and warrants that he owns United States Letters Patent No. 2,542,975, issued to him on February 27, 1951, for an Erecting Mechanism for Reducing Turn Errors in Vertical Gyroscopes, subject to a reservation that the invention described therein may be manufactured and used by or for the Government of the United States for governmental purposes without the payment of any royalty thereon, a copy of which Letters Patent is hereto attached and hereafter referred to as Exhibit "A" and incorporated herein as a part hereof; and Adkins represents that there are no outstanding licenses or agreements that prevent him from entering into a license agreement with respect to said Patent and the inventions covered therein, all as hereafter set forth; and

(B) WHEREAS, Adkins represents and warrants that to the best of his knowledge and belief he is the owner of the inventions covering the substantial claims as disclosed or intended to be disclosed in the Application for U. S. Patent on gyroscopes attached hereto and hereafter referred to as Exhibit "B" and incorporated herein as a part hereof, which application was filed on February 15, 1954, and is presently pending in the United States Patent Office and that there are no licenses or agreements outstanding which prevent him

from granting unto Lear an exclusive license respecting said inventions and products embodying said inventions, in accordance with the further provisions hereof, and

(C) WHEREAS, Adkins represents and warrants that to the best of his knowledge and belief he is the owner of the inventions disclosed or intended to be disclosed for a no-gimbal lock feature for a gyroscope as set forth in Disclosure I attached hereto and hereafter referred to as Exhibit "C" and incorporated herein as a part hereof, and that there are no licenses or agreements outstanding which prevent him from granting unto Lear an exclusive license respecting said inventions and products embodying said inventions, in accordance with the further provisions hereof; and

(D) WHEREAS, Lear is to acquire a non-exclusive license under said Exhibit "A" hereof and an exclusive license under any and all applications for patents and patents claiming the subject matter referred to in Exhibits "B" and "C" hereof, to manufacture, and sell products embodying the respective inventions of said Exhibits "A", "B" and "C".

NOW, THEREFORE, in consideration of the foregoing and $500.00 in hand paid, receipt whereof is hereby acknowledged, and of the covenants and conditions hereinafter contained, it is hereby agreed by and between the parties hereto as follows:

1. DEFINITIONS:

(a) The phrase Exhibit "A", as used in this agreement shall be deemed to refer to and include United States Letters Patent No. 2,542,975 and all renewals, extensions and reissues thereof, issued on the subject

matter of said letters patent and all improvements thereof.

(b) The phrase Exhibit "B" as used in this Agreement shall be deemed to refer to and include the application for United States Letters Patent filed on February 15, 1954, attached hereto, and all continuations and divisions thereof and all patents issued or issuing thereon to Adkins with respect to the inventions disclosed or intended to be disclosed therein and all improvements thereof, and all renewals, extensions, reissues of any patents issued pursuant thereto.

(c) The phrase Exhibit "C" as used in this Agreement shall be deemed to refer to and include Disclosure I attached hereto and all applications for United States Letters Patent filed with respect to the inventions disclosed or intended to be disclosed therein, and all improvements thereon and all continuations and divisions of all such applications and all patents issued or issuing with respect thereto and all renewals, extensions, and reissues thereof.

(d) The Term "said inventions" as used in this Agreement shall include (1) all claims and inventions disclosed or claimed in said Exhibit "A", and (2) all claims and inventions disclosed or intended to be disclosed in said Exhibit "B" and (3) all claims and inventions disclosed or intended to be disclosed in said Exhibit "C", but only to the extent that such claims or inventions mentioned in said Exhibits are patented or patentable by Adkins.

(e) The term "gyro assembly" as used herein is defined as the cased instrument which intimately contains the gyro structure and other appurtenances necessary

for proper operation of the gyro structure, all of which are included within the gyro assembly case. The term "gyro structure" as used herein is defined as the high-speed gyro rotor, gimbals, frame and attachments thereto.

(f) The term "gyro system" as used herein is defined as the "gyro assembly" and components or accessories necessary to produce earth and/or aircraft gyro signals for use by other equipment such as indicators, autopilots, bombing systems, fire control systems, etc., which such other equipment such as indicators, autopilots, bombing systems, fire control systems, so using the gyro system signals shall not be considered as part of the gyro system.

(g) In determining whether any particular component or accessory constitutes a part of the gyro assembly or gyro system, the test shall be to ascertain whether removal of the particular component or accessory affects the accuracy of the gyro assembly or gyro system signals. If removal does affect the accuracy of the gyro assembly or gyro system signal, the component or accessory removed shall be deemed a part of the gyro assembly or the gyro system, but if removal does not affect the accuracy of such signal, then it shall not be deemed a part of the gyro assembly or gyro system.

(h) Whenever in this Agreement the words "claim", "claims", "invention", or "inventions" are used, in accordance with the context of the terms of the Agreement, the plural shall apply to the singular or the singular shall apply to the plural.

2. GRANT.

(a) Subject to the provisions for termination hereinafter set forth, Adkins hereby gives and grants unto

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CARD 14

Lear (1) a non-exclusive right and license under all the claims of said Exhibit "A" and (2) an exclusive license under all the claims of said Exhibits "B" and (3) an exclusive license under all the claims of said Exhibit "C", to manufacture or have manufactured for it, use and sell products and parts and components thereof (including gyros, gyro systems, gyro apparatus and gyro mechanisms) covered by or containing one or more or all of the inventions and any patents issued or hereafter issued thereon and any divisions, continuations or reissues thereof, and all modifications and improvements thereof, throughout the United States and all foreign countries; it is understood, however, that whenever the word "claims" is used in this paragraph it shall mean the claims in the respective Exhibits which have been patented or will be patentable by Adkins. Lear shall have the right on ninety days' prior written notice to Adkins, to terminate any one or more of the licenses herein granted.

(b) Lear at its opinion and expense may, for and in the name of Adkins, file applications for patents in any foreign countries for any of the inventions licensed herein except those under Exhibit "A". In the event Adkins desires to have an application for a patent respecting such inventions filed in any designated foreign country he shall so notify Lear in writing. Lear shall thereupon have ninety days from and after receipt of such notice, to determine whether it wishes to file such application in the country designated; and if within said period it so files at its expense, it shall retain and have the exclusive right and license to use said inventions in the manufacture and sale of products embodying such inventions in such foreign country. However, if it elects not to so file an application and there-

after Adkins files an application in such foreign country at his expense, then from and after the date of the issuance of the patent, Lear shall have a non-exclusive right and license to use the inventions described in said patent so issued, in the manufacture and sale of products embodying such inventions in such foreign country.

(c) This agreement shall continue in force and effect until the expiration of the last to expire of any patent now or hereafter issued and related to the subject matter of this agreement, including all continuations, renewals, extensions and reissues thereof, unless terminated sooner by act of the parties pursuant to the provisions hereof.

3. ROYALTIES.

(a) While one or more of the licenses granted under this Agreement is in effect, Lear agrees to pay Adkins with respect to products incorporating said inventions manufactured and sold under those licenses that are in effect, royalties of 1¼% based on net sales prices as hereinafter in sub-paragraphs (c), (d) and (j) defined, received by Lear for said products, it being understood that said rate shall be paid only on products incorporating one or more or all of said inventions.

(b) No royalties shall be computed or paid on account of the manufacture by or for or sale to, on behalf of, or for the use of the U. S. Government, of products which incorporate only the inventions disclosed in or covered by Exhibit "A".

(c) Net sales prices on which royalties are payable shall be the final sales price established for the products sold after price adjustment or price redetermina-

tion whether voluntarily or by contract. In the case of cost reimbursement contracts, the final price shall be the costs finally allowed and paid to Lear. In the event the final price is higher than the initial or interim price, Lear will pay to Adkins the additional royalties due him upon determination of such final higher price. In the event the final price is lower than the initial or interim price, Lear shall deduct from future royalties thereafter payable to Adkins, an amount equal to 25% of each future royalty payment subsequently becoming due, until it shall have received the full amount of the excess royalties theretofore paid to Adkins.

(d) Net sales prices with respect to the sales of products incorporating inventions licensed hereunder and also containing other assemblies or components in addition thereto which do not incorporate the said inventions, shall for the purposes of determining royalties payable to Adkins, be the price established in each such contract for the "gyro assembly" or "gyro system" as hereinbefore defined which incorporates the inventions herein licensed. Where no separate price is established in any such contract for the "gyro assembly" or "gyro system", net sales price of such "gyro assembly" or "gyro system" shall be the price charged by Lear, under each such contract, for a spare "gyro assembly" or "gyro system" which incorporates the inventions herein licensed. Where there is no price established for such gyro assembly or gyro system in any such contract, either initially or as a spare part, then the net sales price of the gyro assembly or gyro system on which royalties are paid, shall be that part of the price of the entire product, which the cost of manufacture of the gyro assembly or gyro system incorporating the

inventions, bears to the cost of manufacture of the entire product.

The following specific examples will serve to illustrate the method of determining which items shall be included in computing net sales price on which royalties are based:

(1) In a VGI utilizing any one or more of the inventions, the royalty shall be computed on the net sales price of the "gyro system" which is the Type K-4 control. The indicator is not included in computation of net sales price since if the indicator is removed, the accuracy of the gyro system signals would not be affected.

(2) In compass systems, such as the Lear Type 1284, utilizing any one or more of the inventions, the royalty shall be computed on the net sales price of the complete "compass system", except for the earth's magnetic detector and the indicators, since if the earth's magnetic detector and indicator are removed, the accuracy of the gyro assembly signals as such would not be affected.

(3) In indicator systems such as the NAFLI, utilizing any one or more of the inventions, the royalty shall be computed on the net sales price of the "gyro assembly." The basic purpose of the NAFLI system is to provide indication, and the system other than the "gyro assembly" will not be included in the amount on which the royalty is computed, since if all components of the NAFLI system other than the "gyro assembly" are removed, the accuracy of the "gyro assembly" signals as such would not be affected.

(4) In auto pilots such as the Type F-5, utilizing any one or more of the inventions, the royalty shall

be computed on the net sales price of the "gyro assembly." The basic purpose of the F-5 auto pilot is to control the aircraft, and the system other than the "gyro assembly" will not be included in the amount on which the royalty is computed, since if all components of the F-5 auto pilot other than the "gyro assembly" are removed, the accuracy of the "gyro assembly" signals as such would not be affected.

(e) It is specifically recognized and agreed by the parties hereto that prior to January 1, 1955, no sales were made by Lear of any products under the licenses herein granted or subject to royalty as herein provided. Lear shall submit to Adkins a full and correct statement of the net sales prices received on all sales by it of products subject to royalty under the licenses herein granted which are then in effect during each quarter-annual period beginning January 1, 1955. For the purposes of this Agreement, quarter-annual periods are defined as follows: the first quarter-annual period shall be the months of January, February, March; the second shall be April, May, and June; the third, July, August, and September; and the fourth, October, November, and December. Lear shall submit the said statement for each quarter-annual period within sixty days after the end of each quarterly period, that is, within sixty days after March 31st, June 30th, September 30th and December 31st of each year, and each statement submitted shall be accompanied by payment in full for royalties shown due. The first such statement to be made under this Agreement shall be submitted to Adkins within sixty days after Sept. 15, 1955, covering the period from January 1, 1955, through Sept. 30, 1955.

(f) If any products subject to royalty are sold by Lear to any person, firm, or corporation in which Lear has any direct or indirect pecuniary interest in excess of 50% of the total capital and surplus of such person, firm, or corporation, and said products shall be resold by said purchaser at a price greater than Lear's sales price, then in the computation of royalties due hereunder, the net resale price received by said purchaser on resales of said products shall be taken as Lear's net sales prices received for said products.

(g) Unless this Agreement is sooner terminated as herein provided, Adkins shall be entitled to receive a minimum royalty in the sum of $250.00 upon execution hereof, and on January 1, 1956, and a minimum royalty in the sum of $500.00 on January 1, 1957, and on January 1st of each year thereafter that this Agreement is in effect, on account of each of the following groups of products manufactured and sold by Lear, (provided the Licenses as to Exhibits A, B, and C, respectively, are in force and effect), (a) embodying the inventions of Exhibit "A"; (b) embodying the inventions disclosed or intended to be disclosed in Exhibit "B" and (c) embodying the inventions disclosed or intended to be disclosed in Exhibit "C". The payments made under this paragraph shall be applied as a credit in reduction of the royalty payments due Adkins under this Paragraph 3, for such year. If said minimum royalties are not paid, then the only right of Adkins shall be to cancel, such one of the Licenses herein granted, for which minimum royalty payments as above provided for have not been paid by Lear. After receipt of notice of cancellation of such License, Lear shall have no further right to manufacture products incorporating the inventions disclosed under such cancelled License,

except that Lear may for a period of ninety days from and after such notice of cancellation complete the manufacture and sell any of such products then in process or on hand, and Adkins shall receive his royalty on all of such products as in Paragraph 3 hereof provided. Nothing herein set forth shall be deemed to obligate Lear to manufacture, produce or sell any products embodying inventions described and set forth in Exhibits "A", "B" and "C" hereof. If during any one full year beginning after January 1, 1959, the total annual net sales prices of products sold embodying said inventions as herein defined, either separately or in combination, do not exceed $35,000.00 under the licenses herein granted, then unless such failure is the result of war, act of God, strikes, national emergency, governmental rules or regulations or any other cause beyond Lear's control, said licenses with respect to inventions contained in Exhibits "B" and "C" shall thereafter become non-exclusive licenses instead of exclusive licenses as herein granted.

(h) If under the terms hereof Lear cancels its license under the inventions contained in Exhibit "C", then the license granted with respect to the inventions contained in Exhibit "B" shall continue as an exclusive license. In such event Adkins shall thereafter have the right to use and to license others to use, the inventions contained in said Exhibit "B" but only in products which also embody in combination the inventions disclosed in Exhibit "C". Adkins, however, shall have no right to use or to license others to use the inventions contained in Exhibit "B" in the manufacture or sale of any products unless such products also incorporate the inventions disclosed in Exhibit "C".

(j) The term "net sales price" wherever used herein shall not include the amount of any tax, insurance, duty, packing, shipping, or crating charge or any other similar items, which are separately indicated and charged in the agreement or invoice, or of which written notice is given to Adkins.

4. BOOKS AND REPORTS

Lear agrees to keep accurate and complete books and reports showing in detail all said products made and sold by it under the licenses herein granted, and agrees that said books and records relating only to sales of said products shall be open for inspection, subject to any security regulations of the United States Government, by Adkins or a Certified Public Accountant selected by him, during normal business hours, but no oftener than twice a year. In the event that any royalty payment is based upon Lear's cost of manufacture, as in Paragraph 3(d) hereof provided, then in such event Adkins shall have the right, subject to any security regulations of the United States Government, to be exercised only once with respect to any such royalty computation, to inspect Lear's books and records relating only to the cost of manufacture of that specific product, the royalty for which was computed upon Lear's manufacturing cost. Adkins agrees that neither he nor such Certified Public Accountant selected by him will disclose to any person, firm, company, or corporation any information or knowledge which may be obtained from or disclosed in any books and records of Lear, and Adkins further agrees that he and such Certified Public Accountant will treat all of such information and knowledge as confidential. Lear agrees that, on or before the dates above specified for payment of royalties to Adkins, it

will deliver to Adkins complete reports showing in detail all items covered by said royalty payments and how the royalties in each case have been computed.

5. SUITS FOR INFRINGEMENT.

In the event that any third party or parties shall institute suit against Lear asserting that the manufacture, sale or use by Lear of products under the licenses herein granted, constitutes an infringement of a patent or patents owned by the plaintiff or plaintiffs in such suit, then Lear shall place in escrow all further royalty payments due or payable to Adkins (including Minimum Royalty Payments) under this Agreement with respect to the license involved, from the time of the institution of such suit until such suit shall be finally terminated. Lear shall have the right but shall not be obligated to defend such suit; and if Lear successfully defends such suit, it shall bear the cost of such defense, but if Lear unsuccessfully defends the suit, then Lear shall be reimbursed from the escrow account by an amount equal to the costs, attorneys, and other fees, judgments and other expenses Lear incurred due to such suit, less the amount it may be awarded and collect from the said plaintiff or plaintiffs, and any residue from the escrow account shall then be paid to Adkins. However, Adkins shall not be required to reimburse Lear beyond the amount of the escrow account at the suit termination for any such costs, fees, and other expenses.

6. INVALID PATENTS

In the event that patent No. 2,542,975, attached hereto as Exhibit "A" is held invalid or in the event the U.S. Patent Office refuses to issue a patent on the substantial claims of the application attached as Ex-

hibit "B", or if such a patent so issued is subsequently held invalid, or in the event an application for U. S. Patent is filed on the inventions contained in Exhibit "C" and the United States Patent Office refuses to issue a patent on the substantial claims thereof or if such a patent so issued is subsequently held invalid, then in any of such events Lear at its option shall have the right forthwith to terminate the specific license so affected or to terminate this entire Agreement and no further royalties shall thereupon be payable under the license so terminated or under this Agreement if Lear shall have elected to terminate this Agreement in its entirety.

7. *MARKING.*

Lear agrees to place the required statutory patent notice upon each and every one of said products licensed hereunder.

8. *BANKRUPTCY*

If Lear shall be declared a bankrupt or insolvent, or make any assignment for the benefit of creditors, or have a receiver appointed, and if such receiver is not removed within 120 days, then such act or event may, at the option of Adkins, be considered as a material breach of this Agreement, and said agreement may thereafter be terminated by Adkins forthwith.

9. PROSECUTION OF PATENT APPLICATIONS.

As part of the consideration for the licenses herein granted, Lear agrees to pay to Adkins $540.00 on execution hereof, to reimburse him for patent costs already incurred by him, and Lear further agrees to pay all costs hereafter incurred for preparation and prosecu-

tion of all applications for patents on inventions set forth and disclosed in Exhibits "B" and "C" hereof, provided Adkins has secured the prior written approval of Lear therefor. Adkins agrees with due diligence to file and prosecute applications for United States letters patent covering all said inventions and shall submit all such applications to Lear for approval prior to the filing thereof. Adkins further agrees that if Lear desires to prepare said patent applications then at Lear's request he will assist Lear in the preparation thereof and will cooperate fully in all matters relating thereto with Lear or its patent counsel and will execute all papers and take all rightful oaths and Adkins shall immediately upon receipt by him, furnish to Lear a copy of each action taken by the U.S. Patent Office with respect to such applications and to consult with Lear before taking any action with respect thereto, and also to notify Lear when a patent or patents have issued.

10. TERMINATION

(a) If Lear shall default in the payment of any minimum or earned royalties hereunder or in the furnishing of any reports required by this Agreement, and shall not cure such default within thirty days after written notice thereof has been given to Lear, or shall breach any other terms of this Agreement and shall not cure such other breach within sixty days after written notice thereof has been given to Lear, then Adkins may, by written notice, terminate this Agreement forthwith after the expiration of said respective thirty-day or sixty-day periods, if any such default is not cured.

(b) Failure to terminate this Agreement for any breach shall not be construed as a waiver of the right so to do for any continuation or repetition of said

breach, or any subsequent breach of the same or dissimilar nature.

11. EMPLOYMENT

It is understood that Adkins has been employed by Lear prior to this date and will continue in its employ after this date pursuant to an employment agreement entered into simultaneously herewith. It is further understood that if hereafter the employment of Adkins shall terminate for any reason whatsoever then in such event this License Agreement shall contiune in full force and effect in accordance with all of the terms hereof and subject only to the following additional conditions:

Within fifteen (15) days after the expiration of six full months from the date of termination of the employment of Adkins, Lear shall notify Adkins in writing, that it exercises one of the following four options:

A. To agree that Adkins shall be entitled to receive a minimum royalty at the rate of $15,000.00 annually beginning after the expiration of said six full months from the date of termination of the employment of Adkins, in which event the license herein granted with respect to Exhibit "A" shall continue as a non-exclusive license, and the licenses herein granted with respect to Exhibits "B" and "C", shall continue as exclusive licenses with Lear.

B. To agree that Adkins shall be entitled to receive a minimum royalty at the rate of $10,000.00 annually beginning after the expiration of six full months from the date of termination of the employment of Adkins, in which event the license herein granted with respect to Exhibit "B" shall continue as an exclusive license

with Lear, and the licenses granted with respect to Exhibits "A" and "C" shall continue as non-exclusive licenses with Lear.

C. To agree that Adkins shall be entitled to receive a minimum royalty at the rate of $5,000 annually, beginning after the expiration of six full months from the date of termination of the employment of Adkins; in which event the license herein granted with respect to Exhibit "C" shall continue as an exclusive license with Lear, and the licenses granted with respect to Exhibits "A" and "B" shall continue as non-exclusive licenses with Lear.

D. To agree that Adkins shall not be entitled to receive any minimum royalty (except only that provided by paragraph 3 (g)) but rather only actual earned royalties, beginning after the expiration of six full months from the date of termination of the employment of Adkins, in which event the licenses herein granted with respect to Exhibits "A", "B", and "C" shall continue as non-exclusive licenses with Lear.

If Lear exercises option A or option B or option C above, then in such event, if the earned royalties payable for any quarter-annual period thereafter (as the quarter-annual periods are defined in Paragraph 3 hereof) are less than ¼ of the annual minimum royalties specified in the option which Lear exercises, Lear shall pay the difference between the earned royalties for such quarter-annual period and the amount equal to one-fourth of the said annual minimum royalty; provided however, that excess earned royalties in any previous quarter-annual period shall be applied and carried forward to succeeding quarter-annual periods, and provided further that in determining royalties payable to Adkins

for the final October, November, and December quarter-annual period of each calendar year, a readjustment or recomputation shall be made, so that Lear shall receive full credit against the minimum annual royalties for all amounts theretofore paid by Lear in such calendar year, either to cover earned royalties or to cover deficits in royalties for prior quarter-annual periods in such calendar year; and if royalties actually earned by Adkins during any such calendar year exceed the annual minimum royalties, then any excess payments made by Lear during such year, not representing royalties actually earned by Adkins, shall be carried forward and be credited against royalties becoming due for subsequent quarter-annual periods.

In the event Lear shall exercise option A, then within ten days after the end of any quarter-annual period thereafter, Lear shall have the further right and option to notify Adkins, that it cancels the exercise of option A and in lieu thereof, adopts and exercises option B or option C or option D above, beginning with the quarter in which such notice is given. It is further understood that if option B is at any time exercised by Lear, then within ten days after the end of any quarter-annual period thereafter, Lear can by notice in writing to Adkins, cancel the exercise of option B and in lieu thereof adopt and exercise option C or option D beginning with the quarter in which such notice is given. It is further understood that if option C is at any time exercised by Lear, then within ten days after the end of any quarter-annual period thereafter Lear can by notice in writing to Adkins, cancel the exercise of said option C and in lieu thereof adopt and exercise option D beginning with the quarter in which said notice is

given. If, as a result of the exercise of any option by Lear, any license becomes non-exclusive, then in such event Lear cannot thereafter exercise any option which will change such non-exclusive license so that the same would become exclusive, except upon securing the consent of Adkins.

In the event Lear fails to notify Adkins in writing that it exercises one of said options A, B, C or D within fifteen (15) days after expiration of six full months from the date of the termination of the employment of Adkins, then it shall be deemed that option D has been exercised by Lear.

12. PATENT INFRINGEMENT SUIT.

In case Adkins and Lear shall agree that suit shall be commenced against any third party for infringement of any patents, claims or inventions embodied under this Agreement, then all costs and expenses, including counsel fees, incurred in prosecuting such suit shall be borne one-half by each. If such suit shall result in a final award of damages, the net proceeds received as a result of said suit after deducting all costs and other expenses, including counsel fees (for which Adkins and Lear shall be reimbursed) incurred in prosecuting such suit, shall be divided one-half to Lear and one-half to Adkins.

13. PREVIOUS AGREEMENT.

This Agreement cancels and supersedes the Agreement between the parties hereto dated December 29, 1951, and any and all other agreements between the parties hereto, entered into prior to the date hereof and relating to any inventions, discoveries or patents of Adkins or otherwise.

14. NOTICES.

Any notice hereunder must be in writing and shall be given by registered mail, postage prepaid. For the purposes of notices under this Agreement the address of Adkins shall be:

468 Twenty-first Street
Santa Monica, California

and the address of Lear shall be:

3171 South Bundy Drive
Santa Monica, California
Attn: Richard M. Mock, President

Either party may, at any time, by thirty days' notice in writing, to the other, designate any other address in place of those specified above.

15. SUCCESSION.

Neither this Agreement nor any of its benefits nor the licenses, rights, or privileges herein granted shall be directly or indirectly, by operation of law or otherwise, assigned, transferred, divided, or shared by Lear without the prior written consent of Adkins. However, this Agreement may be assigned or transferred by Lear to any subsidiary or to any corporation with whom Lear may merge or consolidate or which acquires the major assets or instrument product business of Lear; and this Agreement may be assigned or transferred by Adkins and his heirs and assigns.

16. APPLICABLE LAW.

It is agreed that the laws and decisions of the State of California, wherever applicable, shall be followed in interpreting and deciding any questions arising from this Agreement.

17. LIST OF PRODUCTS.

It is hereby specifically agreed and understood by the parties that on the date of execution hereof the MA-1 compass Lear Model No. 5005, the Directional Steel Gyro Lear Model No. 2152, and the Vertical Steel Gyro Lear Model No. 2153, are the only products manufactured by Lear under the licenses herein granted, which contain any of the inventions or claims described and covered by the respective Exhibits under this Agreement. As and when additional products are manufactured by Lear under the licenses herein granted and which contain any of the inventions or claims described and covered by the respective Exhibits under this Agreement, Lear agrees to so notify Adkins and to identify the product or item by a model number or identification number, and specify which invention is incorporated or used therein, with respect to the respective Exhibits. Lear shall furnish such list of all items, as aforesaid, to Adkins not later than 30 days after the commencement of the manufacture of any new item incorporating any of the inventions, as aforesaid, provided however, that nothing herein contained shall require Lear to furnish any information to Adkins which Lear is prohibited from disclosing under the terms of any Government contracts.

18. RENEGOTIATION.

This Agreement shall be deemed to be subject to and be deemed to contain all required provisions of the Renegotiation Act of 1951 as it may be amended or

extended, or any other Renegotiation or similar Act in effect during the term of this Agreement.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in duplicate on the dates set opposite their respective signatures.

Witness:

Robert H. Bloomberg

John S. Adkins

LEAR INCORPORATED

Philip E. Golde
Secretary

By Richard M. Mock

September 10, 1957

Mr. John S. Adkins
468 Twenty-First Street
Santa Monica, California

Dear Mr. Adkins:

With reference to the license agreement entered into between you and Lear, Incorporated on or about September 15, 1955, we wish to inform you that we have reviewed your patent application (Exhibit B to the agreement) and conclude that it does not disclose any inventions utilized in any Lear equipment except the MA-1 system and certain components thereof. Specifically, we do not believe that any models of the so-called Steel Gyro come within the scope of Exhibit B.

We have made a search of the U.S. Patent Office files and believe that the method of bearing alignment heretofore and currently used in assembling the Lear Steel gyroscopes is not patentable. A copy of Grenat patent No. 2,531,334 found in that search was delivered to you on January 8, 1957.

Accordingly, we are preparing a revised statement of royalties paid under the agreement, as of June 30, 1957. A preliminary check indicates that if Lear, Incorporated takes credit for sums heretofore paid to you in error, the statement will show an over-payment as of June 30, 1957. We expect this statement to be completed in a very few days and would like you to check the computations that will be contained therein and report to us promptly if you believe them to be in error in any respect.

We should also like to renew our invitation to you and your counsel to meet with us at any time convenient to you to discuss prosecution of your patent application Exhibit B and any other matters of mutual interest under the agreement.

Very truly yours,

LEAR, INCORPORATED

H. J. Downes

Chief Patent Counsel

HJD:trb

cc: P. E. Golde

April 8, 1959

Mr. John S. Adkins
468 Twenty-First Street
Santa Monica, California

Dear Mr. Adkins:

Reference is made to License Agreement between you and Lear, Incorporated dated the 15th day of September, 1955.

Pursuant to its rights of termination as contained in said agreement, including but not limited to Paragraphs 2(a) and 6 thereof, Lear, Incorporated hereby exercises its rights and options to terminate the agreement and the licenses therein granted.

Very truly yours,

Richard M. Mock,
President

RMM:tb
cc: Fulwider, Mattingly & Huntley
Registered Mail

FULWIDER, MATTINGLY & HUNTLEY
Patent, Trademark and Copyright Causes
5225 Wilshire Boulevard
Los Angeles 36
Webster 5-1265

April 20, 1959

Lear, Incorporated
3171 South Bundy Drive
Santa Monica, California

Attention:

Mr. Richard M. Mock
President

Re: Adkins-Lear, Incorporated
License Agreement

Gentlemen:

Our client Mr. Adkins has received your letter of April 8, 1959 and has requested that we answer it on his behalf.

We do not under the circumstances agree with your attempted cancellation of the agreement of September 15, 1955 from either a legal or equitable standpoint, and repeat our demand for an accounting as set forth in our letter of March 20, 1959.

Please take notice that you will be held strictly liable for any further use of any of Mr. Adkins' ideas, discoveries, or inventions in connection with the manufacture or sale of gyroscopes, whether under the terms of the aforementioned agreement or otherwise.

Very truly yours,
Fulwider, Mattingly & Huntley
By John M. Lee

JML:ag
cc: Mr. John S. Adkins
Certified Mail
Return Receipt Requested

APPENDIX D.

Excerpts From the Briefs on Appeal to Both the District Court of Appeal and to the California Supreme Court, and the Petition for Rehearing Before the California Supreme Court Showing How the Federal Questions Were Raised and Preserved.

(In compliance with Rule 23(f) of the United States Supreme Court)

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1. *Excerpts From:*

Opening Brief for Lear Concerning the Directed Verdict and the Denial of Lear's Motion for Judgment Notwithstanding the Verdict, All With Respect to the 2156 Gyroscope.

This appeal is concerned with a United States Letters Patent which the trial court adjudicated invalid because it purports to cover things that are in the public domain. The trial court held that defendant is obligated to pay royalties under the patent even though the license agreement between the parties concerning the patent was terminated and even though the patent is invalid and unenforceable against the rest of the world.

The appeal is based upon the violation of defendant's Constitutional rights by enforcement of the patent against defendant under guise of state law based upon duty derived from the unjust enrichment doctrine and not upon duty imposed by contract. The state courts do not have jurisdiction or power apart from an agreement or contract to enforce a United States Letters Patent under the common law or under any state law or under an implied-in-law obligation.

Furthermore, the plaintiff does not have any protectible property rights that would support the judgment of the trial court on any legal theory. (p. 3)*

The duty imposed by the trial judge is to the effect that a licensee under an application for a patent who lawfully terminates the license agreement in accordance with the provisions of the agreement and before any patentable aspect is recognized by the Patent Office and before the patent actually issues, is estopped from contesting the validity or infringement of claims presented to the Patent Office subsequent to termination (p. 6) of the license agreement. The duty imposed by the trial judge is also to the effect that the former licensee is obligated to pay royalties to the patent owner at the rate specified in the terminated agreement even though the patent is invalid as a matter of law because what it purports to cover is in the public domain.

This is an implied-in-law obligation based upon the unjust enrichment doctrine. Such an obligation would require all licensees under applications for patents to be bound by the patent after it issues even though the license agreement has previously been terminated and has no further force or effect.

This results in enforcement of plaintiff's patent under guise of state law and the common law without taking validity or infringement of the patent into consideration.

This is clearly a violation of defendant's Constitutional rights. Patents and the laws relating to patents

*References are to the pages of the briefs from which the excerpts are taken.

were enacted pursuant to Constitutional authority. These laws, like other laws of the United States enacted pursuant to Constitutional authority, are the supreme law of the land. (p. 7)

Contentions on Appeal.

1. Plaintiff's patent is invalid as a matter of law, and the trial court had jurisdiction and the duty to consider this issue as an incident to the counts and defenses asserted in this action.
2. The license agreement between the parties was terminated on April 8, 1959, as a matter of law and it has no force or effect after that date.
3. There are no protectible property rights in plaintiff subsequent to the termination of the license agreement other than his rights under the United States Patent Laws, and a state court does not have jurisdiction over cases arising under the patent laws. (p. 17)
4. There is no conduct or basis for any implied-in-fact obligation, and there is no consideration or duty or basis for any implied-in-law obligation with respect to the 2156 gyros or any other products sold by defendant.
5. Even if the license agreement had not been terminated, defendant has the right to show that plaintiff did not obtain the claims which were in the patent application at the time the license agreement was consummated and that the claims which ultimately issued are markedly different and of no benefit to defendant, so that there is no basis for liability. (p. 18)

ARGUMENT.

I.

Plaintiff's Patent Fails to Meet the Constitutional Standard Required for Patentability.

The basis for the United States patent system is found in Article I, Section 8 of the Constitution, the pertinent portion of which is as follows:

> "The Congress shall have power . . . to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries."

Congress has enacted laws pursuant to this power, and most of the laws are set forth in Title 35 of the United States Code. Sections 101, 102 and 103 set forth the requirements for patentable inventions and specify that they must be new and novel and not obvious to one skilled in the art to which the invention pertains. Section 112 states that the patent shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Section 6 of Title 35 of the United States Code gives the Commissioner of Patents the power to establish rules and regulations for the conduct of proceedings in the Patent Office, and the Commissioner has done so by issuing Rules of Practice of the United States Patent Office in Patent Cases. Rules 41-138 relate to the requirements for applying for a patent and the procedure

before the Patent Office. Rules 106, 111, 112, 119 and 133 concern the rejection of claims by the Patent Office and the action required by the applicant. In pertinent part, they read as follows:

"106. (a) If the invention is not considered patentable, or not considered patentable as claimed, the claims, or those considered unpatentable will be rejected.

"111. (a) After the Office action, if adverse in any respect, the applicant, if he persists in his application for a patent, must rely thereto and may request reexamination or reconsideration, with or without amendment.

. . .

"(c) In amending an application in response to a rejection, the applicant must clearly point out the patentable novelty which he thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. He must also show how the amendments avoid such references or objections.

"112. After response by applicant (rule 111) the application will be reexamined and reconsidered, and the applicant will be notified if claims are rejected, or objections or requirements made, in the same manner as after the first examination. Applicant may respond to such Office action, in the same manner provided in rule 111, with or without amendment, but any amendments after the second office action must ordinarily be restricted to the rejection or to the objections or requirements made, and the application will be again considered, and so

on repeatedly, unless the examiner has indicated that the action is final.

"119. The claims may be amended by canceling particular claims, by presenting new claims, or by amending the language of particular claims (such amended claims being in effect new claims). The requirements of rule 111 must be complied with by pointing out the specific distinctions believed to render the claims patentable over the references in presenting arguments in support of new claims and amendments.

"133. (b) In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for response to Office actions as specified in rules 111, 135."

Thus, the proceeding first involves filing an application for a patent with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention. If the claims are not considered patentable, they are rejected by the Patent Office. The applicant may request reconsideration by filing an amendment in which the distinctions in the claims believed to render them patentable must be pointed out, and the claim language may be changed by amendment or by presenting new claims.

The procedure for obtaining a patent usually requires several years, and the applicant acquires no property right in an invention by filing an application for a patent.

(p. 21)

Defendant submits that obtaining allowance of the claims in suit by an interview with the Examiner on approximately March 30, 1959, without a record of the matters discussed or the arguments presented or who participated in the interview on behalf of plaintiff, is a failure to comply with the requirements for obtaining a valid patent. The file history of a patent must show these matters in order to afford proper interpretation of the claims.

A very similar situation arose in *Technograph Printed Circuits, Ltd. v. Bendix Aviation Corp.* (D. Md. 1963), 218 F. Supp. 1 [affirmed (4th Cir. 1964) 327 F.2d 497], wherein the court stated at pp. 23-24:

> "Moreover, in this case the initial rejection of the claims in the three patents on the cited art, but the final capitulation and issuance of the patents without any explanation on why or how the cited art formerly held to be controlling is now to be distinguished, weakens their prima facie validity. Especially is this so where, as here, the most significant allowances occur after conferences, with no record statement or summary of the matters discussed or the arguments producing persuasion; nor even any
>
> (p. 26)
>
> reference to the names of the conferees on behalf of the applicant.
>
> In view of these circumstances and the discussion heretofore with respect to the cited art, the court would be strongly inclined to hold that the Examiner was right in his original rejections; wrong in his retreats; and that the patents were invalid in view of the prior art. When the available literature, both patents and publications, not cited,

is considered, and also the ability of persons unaware of the alleged inventions to reach the same results by the same means, the court has no hesitation in holding the patents, and the claims in suit, to be invalid."

The court went on to state at page 46, as follows:

"That fraud, inequitable conduct or bad faith in proceedings in the Patent Office may result in unenforceability of a patent is well established. [Citing numerous authorities]" (p. 27)

It is submitted that the activities of Mr. Turner in first representing defendant and thereafter representing plaintiff concerning the patent application and the license agreement, all with plaintiff's direct knowledge of the activities, is more than enough to result in unenforceability of plaintiff's patent in accordance with the *Technograph* case and the numerous authorities cited therein. (p. 30)

Both plaintiff's assertions and defendant's defenses have placed the validity and infringement of plaintiff's patent claims in issue. (p. 34)

Thus, the trial court had the duty to ascertain whether or not plaintiff's patent meets the standard of invention required by the Constitution. The trial court had jurisdiction to adjudicate invalidity and non-infringment of plaintiff's patent as an incident to the issues of the case founded upon the law of contracts.

However, as will be discussed in the next sections of this brief, the trial court did not have jurisdiction to impose damages with respect to the 2156 gyros on any theory after April 8, 1959 because the license agreement between the parties was terminated

on that date and because plaintiff had no property rights which are protectible in the state courts after the agreement was terminated. (p. 38)

It is submitted further that the directed verdict is in error because the license agreement was terminated, and the law is clear that the doctrine of license estoppel does not continue after termination of the agreement. (p. 46)

The directed verdict is also in error because there is a complete failure of consideration to support any obligation imposed by law, such as under the unjust enrichment doctrine of *Seagren v. Smith.* (p. 46)

When a license includes a termination provision which is exercised by either party, any estoppel to contest validity of the licensed patent does not continue beyond the date of termination. The reason for the rule is that after termination the licensor-licensee status is at an end and the parties stand in the same position and with the same rights that strangers have.

Davis v. Buck-Jackson Corporation (4th Cir. 1956), 230 F. 2d 655;

Miehle Printing Press & Mfg. Co. v. Publication Corporation (7th Cir. 1948), 166 F. 2d 615;

Measurements Corp. v. Ferris Instruments Corp. (3rd Cir. 1947), 159 F. 2d 590;

Tate v. Baltimore & O. R. Co. (4th Cir. 1915), 229 Fed. 141;

Stimpson Computing Scale v. W. F. Stimpson (6th Cir. 1900), 104 Fed. 893;

Walker on Patents (Deller's Ed.), 1937, pp. 1496 and 1505. (p. 47)

The limits of the licensee estoppel doctrine were recognized as early as 1886 in the case of *Brown v. Lapham* (S.D. N.Y., 1886), 27 Fed. 77. In the *Brown* case the defendants were prior licensees of plaintiff who had brought suit against them in equity and who had moved for a preliminary injunction. The court answered plaintiff's motion in the following manner as set forth at page 77:

> ". . . The plaintiff relies upon the estoppel of the defendants to deny the validity of the patent growing out of the license and the operating under it by them. There is no fair question but that a licensee under a patent is estopped to deny its validity of any question arising out of that relation between the parties. *Kinsman v. Parkhurst,* 18 How. 289. (p. 51)
>
> It does not follow that he will be always estopped because he has stood in that relation. When he stands out from under the license, and claims nothing from it, and does nothing more under it, with full knowledge to the licensor of his position, he would appear to be at as full liberty to contest the patent as anyone . . ."

Additional authorities to the same effect are:

H. Tibbe & Son Manufacturing Co. v. Heineken (Circuit Court S.D. N.Y. 1889), 37 Fed. 686;

DeCrew v. Union Bag & Paper Corp. (N.J. 1944), 57 F. Supp. 388;

Howe v. Atwood (E.D. Mich. 1942), 47 F. Supp. 979;

Frost Ry. Supply Co. v. T. H. Symington & Son (Md. 1938), 24 F. Supp. 20;

Chance v. Lehigh Navigation Coal Company (E. Pa. 1938), 25 F. Supp. 532;

Eskimo Pie Corporation v. National Ice Cream Co. (W.D. Ky. 1927), 20 F. 2d 1003;

Bituminous Products Co. v. Headley Good Roads Co. (D. Del. 1924), 2 F. 2d 83. (p. 52)

However, any rights which plaintiff has with respect to his patent, apart from those based upon the license agreement [Ex. 8], must be based upon his statutory patent rights, and not upon the common law or upon state law. Such rights arise under the United States Patent Laws, and the state courts do not have jurisdiction to enforce such rights. (p. 58)

With reference to the first cause of action based upon the express agreement concerning plaintiff's patent, the trial court found that the agreement was terminated. As an incident to interpretation of the agreement, and as an incident to plaintiff's allegation of unjust enrichment under *Seagren v. Smith*, and as an incident to the defenses of failure of consideration to support any kind of obligation, the trial court properly considered the validity of plaintiff's patent and held it invalid. Accordingly, damages cannot thereafter be imposed against defendant under guise of state law, such as on the theory of unjust enrichment found in the case of *Seagren v. Smith*. To award damages on unjust enrichment would interfere with the federal policy, found in Art. I, §8 of the Constitution and in the implementing federal statutes as set forth in the *Compco* and *Sears* cases. (p. 60)

Thus, the trial court expressly found that there was a failure of consideration. Nevertheless, the trial court went on to impose liability with respect to the 2156

gyros on the estoppel theory. As discussed above, the estoppel theory cannot apply as a matter of law to the present action.

There is no consideration under the agreement because the parties have not operated under it since April 8, 1959. There is no consideration under the claims of plaintiff's patent because they are invalid. There is no consideration with respect to what the patent teaches because that has been made public. (p. 78)

Thus, unjust enrichment or an obligation implied-in-law cannot apply as a matter of law because there is no consideration to support such a theory. (p. 79)

By inserting the above in his patent application the plaintiff changed the tenor of his invention. When the patent finally issued in January of 1960 after pending almost six years and undergoing six amendments in which the wording of both the description and the (p. 94)

claims were changed, it was directed to a different invention than the method upon which the contract was based. The patent 2,919,586 [Ex. 10] contains no method claims at all [Exs. 10 and P].

Even though the plaintiff has asserted that the above matter added by amendment filed December 22, 1958, is not new matter [p. 62 of Ex. P], it is clear that it is new matter as a matter of law and that the plaintiff was attempting to re-define his invention. Thus, what plaintiff asserted to be his invention as of December 22, 1958, by amendment, was something markedly different from the invention before the parties when they entered into the license agreement on September 15, 1955. (p. 95)

After the verdict of the jury and the judgment thereon, defendant made a motion for judgment notwithstanding the verdict on this ground. The trial court denied this with respect to the 2156 gyros on the ground of licensee estoppel.

Lear's motion for judgment notwithstanding the verdict should have been granted and the directed verdict (p. 96)

with respect to the 2156 gyros should be vacated because licensee estoppel does not apply as a matter of law. (p. 97)

Thus, it is clearly the law of California that where two parties contract with respect to an invention evidenced by a patent application, the licensee is free to contest the patent when it issues even if the license agreement has not been terminated. This is true even if the suit is for royalties under the license agreement. Estoppel does not apply because the claims of the patent application can be changed after the license agreement is consummated, and the new claims may be subject to the defense of failure of consideration.

In the *Marvin* case, the licensor failed to obtain the claims which were in his application when the license was consummated and the court permitted the licensee to contest the patent when it issued even though the license agreement had no termination provision that could be exercised.

In the present case, the licensor failed to obtain the claims which were in his application when the license was consummated, and defendant can contest the patent which ultimately issued, just as the licensee did in the *Marvin* case. The claims which plaintiff did obtain have been adjudicated to be invalid, and hence there would be

no obligation for defendant to pay royalties on the 2156 gyro even if defendant had not terminated the license agreement. (p. 100)

There has been a failure of consideration in the present action as a matter of law both as to the claims which were in the application at the time the license was consummated and as to the validity of the claims which ultimately issued. Also in the present action defendant has repudiated the license agreement, as well as terminating it in accordance with the license provisions, and the parties have not operated under the agreement at all since April 8, 1959.

Thus, even if the license agreement had not been terminated in accordance with the provisions of the agreement, defendant is free to contest the patent in the present action for royalties pursuant to the agreement, just as the licensees were permitted to do in the *Marvin* and *Crew* cases. (p. 102)

2. *Excerpts From:*

Reply Brief for Lear, Incorporated Concerning the Directed Verdict and the Denial of Lear's Motion for Judgment Notwithstanding the Verdict, All With Respect to the 2156 Gyroscope.

The trial court, in granting defendant's motion for judgment notwithstanding the verdict with respect to all gyroscopes other than the model 2156, relied on the cases of *Bergman v. Aluminum Lock Shingle Corporation of America* (9th Cir. 1958), 251 F. 2d 801; *Monroe Auto Equipment Corp. v. Superior Industries, Inc.* (9th Cir. 1964), 332 F. 2d 473; and *Great Atlantic & Pacific Tea Company v. Supermarket Equipment Corp.* (1950), 340 U. S. 147. [Clk. Tr. p. 2085.] Both Ninth Circuit cases, *i.e.*, the *Bergman* case and the *Monroe Auto Equipment* case, specifically referred to and followed the United States Supreme Court case of *Great Atlantic & Pacific Tea Company, supra.*

The United States Supreme Court has recently reaffirmed the principles set forth in the *Great Atlantic &*

(p. 2)

Pacific Tea Company case, *supra,* in the case of *Graham v. John Deere Company* (1966), 34 U.S. Law Week 4199, opinion dated February 21, 1966; .... U.S. ....; 15 L. Ed. 2d 545. Some of the basic principles that are reiterated in the *Graham* case by the United States Supreme Court are:

(a) ". . . Innovation, advancement, and things which add to the sum of useful knowledge are inherent requisites in a patent system which by constitutional command must 'promote the Progress of . . . useful Arts.' This is the *standard* expressed in the Constitution and it may not be ignored. And it

is in this light that patent 'validity requires reference to a standard written into the Constitution.' *A & P Tea Co. v. Supermarket Corp., supra,* at 154 . . ."

(b) ". . . The grant of an exclusive right to an invention was the creation of society—at odds with the inherent free nature of disclosed ideas—and was not to be freely given. Only inventions and discoveries which furthered human knowledge, and were new and useful, justified the special inducement of a limited private monopoly . . ."

(c) "We believe that this legislative history, as well as other sources, show that the revision (the addition of §103 to Title 34 U.S. Code) was not intended by Congress to change the general level of patentable invention. We conclude that the section was intended merely as a codification of judicial precedents embracing the *Hotchkiss* condition with congressional directions that inquires into the obviousness of the subject matter sought to be patented are a prerequisite to patentability." (p. 3)

(d) "Approached in this light, the §103 additional condition, when followed realistically, will permit a more practical test of patentability. The emphasis on non-obviousness is one of inquiry, not quality, and as such, comports with the constitutional strictures."

(e) ". . . the ultimate question of patent validity is one of law, *A. & P. Tea Co. v. Supermarket Corp.*, supra, at 155, . . ."

In the instant case the trial court in 1964 applied the same tests that are set forth in the *Graham* case in 1966 and concluded that plaintiff's claimed apparatus for supporting bearings is invalid. (p. 4)

The plaintiff asserts in his answering brief in this appeal at page 24 that the defendant licensed all of the claims of the application and all of the claims of any patent issuing thereon. This is ridiculous because it is not possible to take a license on something which is not in existence. Furthermore, under the license agreement the only obligation on the part of the defendant was to pay royalties for the use of patentable inventions. Thus, in the instant case the defendant, as a licensee with an obligation to pay royalties for the use of patentable inventions, was receiving no immediate benefit under the license agreement. The plaintiff had no protectible property right under the United States Patent Laws and therefore the defendant had no patent monopoly or patent protection for its products.

United States patents are the creatures of statute. They find their primary basis in the United States Constitution, Article I, §8, clause 8, which provides in pertinent part:

> "The Congress shall have power . . . To promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries." (p. 25)

Congress has enacted laws pursuant to this power and most of these laws are set forth in Title 35 United States Code. Sections 101, 102, and 103 of Title 35 set forth the requirements for patentable inventions and specify that they must be new and novel and not obvious to one skilled in the art to which the invention pertains.

Sections 111 to 122 of Title 35 provide for the filing of an application for a patent and the requirements

for the patent application. Section 111 of Title 35 provides that an application shall include a specification, a drawing, and an oath. Section 112 of Title 35 provides that the specification shall contain a written description of the invention and "shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention."

Section 6 of Title 35 of the United States Code gives the Commissioner of Patents the power to establish rules and regulations for the conduct of proceedings in the Patent Office, and the Commissioner has done so by issuing Rules of Practice in the United States Patent Office in patent cases. Rules 41 to 138 of these Rules of Practice relate to the requirements for applying for a patent and the procedure before the Patent Office.

A license or contract concerning patent applications and patents have more than the usual two interested parties. Patents from their inception have been de-

(p. 26)

signed to promote the progress of science and were instituted for the public's benefit and not as a reward for the inventor. *Kendall v. Winsor* (1859), 62 U.S. 165, 21 How. 322-331.

As stated by the United States Supreme Court in the case of *Precision Instrument Manufacturing Company v. Automotive Maintenance Machinery Company* (1944), 324 U.S. 806, 89 L. Ed. 1381:

> ". . . The possession and assertion of patent rights are 'issues of great moment to the public.' [Citing cases.] A patent by its very nature is affected with a public interest. As recognized by the

> Constitution, it is a special privilege designed to serve the public purpose of promoting the 'Progress of Science and useful Arts.' At the same time, a patent is an exception to the general rule against monopolies and to the right to access to a free and open market." 324 U.S. at page 815.

This has been consistently applied in the Ninth Circuit Court of Appeals and was commented upon in the case of *Griffith Rubber Mills v. Hoffar* (9th Cir. 1963), 313 F. 2d 1, at page 3 as follows:

> ". . . Patents are issued not for private benefit but for the public good; they grant a monopoly for a limited period as an incentive to the disclosure of innovations which in the end will add to the fund of freely available knowledge. However, the public is entitled to benefit, without granting special concessions, from such advances as normally flow from the application of the ordinary skills of one in the trade to the existing fund of
>
> (p. 27)
>
> public knowledge. Thus the statute prescribes, as a condition of patentability, that what has been accomplished must be such that it would not have been obvious to a hypothetical person skilled in all that could have been known, at the pertinent time, in the field to which the invention relates.
>
> "It follows that though a device may be new and useful it is not patentable if it consists of no more than a combination of ideas which are drawn from the existing fund of public knowledge, and which produces results that would be expected by one skilled in the art. A public grant of the private power to exclude others from making, using, and

> selling such a device simply 'withdraws what already is known into the field of its monopoly and diminishes the resources available to skillful men.' No balancing public benefit results from such a patent since the fund of freely available public knowledge is reduced during the period of monopoly, and is only restored rather than enhanced when that period ends."

In the present action the trial court expressly found that plaintiff's patent attempts to cover something that is in the existing fund of public knowledge and something that would be obvious to one skilled in the art. Thus, plaintiff's patent is invalid, it does not provide protection for any device or product, and its validity with respect to the 2156 gyros can be contested by defendant and also by everyone else because of the public interest which is involved. (p. 28)

The court instructed the jury as follows:

> "Insofar as the Model 2156 is concerned, the defendant, as licensee, is estopped as a matter of law to deny that it used that model. The only question, therefore, is how much does defendant owe plaintiff on Model No. 2156.
>
> "The parties have stipulated that the amount is $16,351.93 as royalties for the period involved.
>
> "This rule of estoppel which I have applied to the Adkins device arises under the principle of law that having accepted the role of a licensee, defendant may not in that role challenge validity of his license or his patent." [p. 2838, lines 1-12].

This application of licensee estoppel is directly contrary to all of the law in this jurisdiction and the others that have ruled upon the subject. (p. 77)

A RULING OF INVALIDITY OF PLAINTIFF'S PATENT IS REQUIRED BY THE UNITED STATES SUPREME COURT CASES OF FEBRUARY 21, 1966.

On February 21, 1966, the United States Supreme Court decided four patent cases. These cases were Nos. 11, 37, 43, and 55 on the calendar for the October Term of 1965. The decisions in these cases are exactly in accordance with the argument set forth in defendant's opening brief herein and support a finding of invalidity of plaintiff's patent and judgment for defendant with respect to its model 2156 gyroscopes. These cases are:

Graham v. John Deere Company of Kansas City (No. 11, decided Feb. 21, 1966), ... U.S. ....., 15 L. Ed. 2d 545, 148 U.S.P.Q. 459;

Calmar, Inc. v. Cook Chemical Company (No. 37, decided Feb. 21, 1966), ... U.S. ....., 15 L. Ed. 2d 545, 148 U.S.P.Q. 459;

Colgate-Palmolive Company v. Cook Chemical Company (No. 43, decided Feb. 21, 1966), ... U.S. ....., 15 L. Ed. 2d 545, 148 U.S.P.Q. 459; (p. 81)

United States v. Adams (No. 55, decided Feb. 21, 1966), ... U.S. ....., 15 L. Ed. 2d 572, 148 U.S.P.Q. 479. (p. 82)

THE DIRECTED VERDICT BASED ON PLAINTIFF'S PATENT RIGHTS SHOULD BE REVERSED BECAUSE PLAINTIFF'S PATENT WAS OBTAINED BY FRAUD AND IS UNENFORCEABLE AND BECAUSE OF PLAINTIFF'S UNCLEAN HANDS WITH RESPECT TO OBTAINING THE PATENT. (p. 118)

The addition of new matter late in the prosecution by the amendment of December 19, 1958, and claims based upon this new matter by the subsequent amendments is expressly prohibited by the United States Patent Laws and in particular, *Title 35 U.S.C. §§102, 132.* When the invention asserted by the new matter and claimed in the new claims was employed in any product sold more than one year before the invention was asserted in the United States Patent Office with the

(p. 126)

knowledge of the parties asserting this new matter, the addition of the new matter and new claims with this knowledge clearly constitutes a fraud on the United States Patent Office and the public.

Defendant's model 2156 gyroscope and defendant's Michigan gyroscopes were sold in 1955 and 1956, and royalties were paid to the plaintiff on these products so that the plaintiff clearly had knowledge of these sales more than two years before the change of tenor of the invention and the addition of claims to set forth this different invention [Exs. 35, 48 and 49 in evidence].

It has been stated by the United States Supreme Court in *Precision Instrument Manufacturing Company v. Automotive Maintenance Machinery Company* (1944), 324 U.S. 806, 89 L. Ed. 1381, a case that involved misconduct in the procurement of a patent, at page 815:

> ". . . The possession and assertion of patent rights are 'issues of grant moment to the public.' Hazel-Atlas Glass Co. v. Hartford-Empire Co., 322 US 238, 246, 88 L ed 2150, 1255, 64 S Ct. 997. See also Mercoid Corp. v. Mid-Continent Invest. Co., 320 US 661, 665, 88 L ed 376, 380, 64 S Ct

268; Morton Salt Co. v. G.S. Suppiger Co. (US) supra; United States v. Masonite Corp., 316 US 265, 278, 86 L ed 1461, 1475, 62 S Ct 1070. A patent by its very nature is affected with a public interest. As recognized by the Constitution, it is a special privilege designed to serve the public purpose of promoting the 'Progress of Science and useful Arts.' At the same time, a patent is an exception to the general rule against monopolies and to the right to access to a free and open market. *The far-reaching social and economic consequences* (p. 127)

of a patent, therefore, give the public a paramount interest in seeing that patent monopolies spring from backgrounds free from fraud or other inequitable conduct and that such monopolies are kept within their legitimate scope. The facts of this case must accordingly be measured by both public and private standards of equity." (Emphasis added).

Another case commented upon by the United States Supreme Court which involved fraud on the United States Patent Office and the public was *Hazel-Atlas Glass Co. v. Hartford-Empire Co.* (1943), 322 U.S. 238, 88 L. Ed. 1250.

Additionally, it has been recently reaffirmed that fraudulent procurement is a good defense in a case involving a patent. *Walker Process Equipment, Inc. v. Food Machinery & Chemical Corp.* (Dec. 6, 1965), 147 U.S.P.Q. 404 at 406, 15 L. Ed. 2d 247, 251. (p. 128)

The imposition of liability with respect to the 2156 gyros under state law based upon the unjust enrichment doctrine on the ground that the 2156 gyros are covered by plaintiff's patent [p. 3080] is a direct violation of

defendant's constitutional rights. The Supreme Court has so held.

In *Sears, Roebuck & Co. v. Stiffel Co.* (1964), 375 U.S. 225, and *Compco Corp. v. Day-Bright Lighting, Inc.* (1964), 367 U.S. 234, the court held that a state cannot give protection of a kind that clashes with the objectives of the federal patent laws, and that a state (p. 137) court cannot enforce a patent which is invalid because under the patent laws everything in such a patent is in the public domain. (p. 138)

After termination there was no proper basis to impose any liability on the defendant. Additionally, there was no proper basis to impose any estoppel on the defendant with respect to plaintiff's subsequently issued patent. The doctrine of licensee estoppel does not apply as a matter of law after termination of the license agreement. Any attempt to enforce plaintiff's patent under (p. 140) state law based upon licensee estoppel or based upon the obsolete authority of *Seagren v. Smith* violates defendant's Constitutional rights. This is because such enforcement of the patent conflicts directly with the United States Patent Laws. These laws were reviewed by the U. S. Supreme Court on February 21, 1966, and the guidelines concerning inventions which are patentable were reaffirmed. Adkins' patent clearly fails to meet the Constitutional standard as set forth by the U.S. Supreme Court. (p. 141)

3. *Excerpts From:*

Respondent's and Cross-Appellant's Opening Brief on Appeal Instituted by Plaintiff From the Judgment for Defendant Notwithstanding the Verdict and From the Order Granting a New Trial in the Alternative and on Cross-Appeal Instituted by Defendant From the Judgment Entered May 4, 1964 and Amended Judgment Entered December 30, 1964.

The primary question under the express contract theory is whether defendant was justified in discontinuing the payment of royalties on the early Michigan gyros, *i.e.*, the models 2[illegible]1, 2152 and 2153, on September 10, 1957, on the basis that the defendant could not receive and had not received any benefit under the executory license agreemnt bcause the plaintiff was unable to and would be unable to get a patent having valid claims covering defendant's Michigan gyroscopes. In considering this question, the ancillary questions of the coverage of the defendant's products by the claims of plaintiff's Patent No. 2,919,586, and the validity of these claims must be considered and are determinative.

(p. 10)

Additionally, plaintiff has no protectible property right under the United States Patent Laws because his claimed invention is, as a matter of law, obvious in view of the prior art. To have a protectible property right the claimed invention must be unobvious, *i.e.*, it must be an invention. The test of invention is whether

(p. 22)

the device would have been obvious to one skilled in the art, and it is a question of law to be determined by the court based upon a constitutional standard.

Even though the prior art may not anticipate a claimed invention in every detail, the disclosures of the prior art may negative invention. That is, in light of the prior art or prior devices the patented device would have been obvious. Every feature and object of plaintiff's patented device is disclosed in one or more of the prior art patents and is thus invalidated as not meeting the constitutional standard of invention.

Furthermore, the plaintiff attempted to change the tenor of his invention and assert something entirely new or different from the original disclosure. The patent laws are specific on this subject and require that the claimed invention be disclosed in a patent application within one year after the first public sale, use or disclosure of the invention. In this case the plaintiff attempted to change the tenor of his invention and to claim something different from the original disclosure more than two years after defendant's products were on the market. This cannot be done.

In addition to the plaintiff not having any protectible property right under the United States Patent Laws because of invalidity of the claimed invention, the plaintiff has no protectible property right or conversely, the defendant has received no benefits under plaintiff's patent because plaintiff's patent claims do not cover defendant's products and thus do not provide any protection to the defendant in the manufacture and sale of its products. In particular, defendant's Michigan products are not covered by the claims of plaintiff's patent which call for three elements wherein two

(p. 23)

of these elements have cooperating surfaces, one adapted to seat against the other, which provides a universal

type joint or ball and socket type joint. Such cooperating surfaces are not required nor found in defendant's Michigan devices. Furthermore, defendant's Michigan devices are not taught nor disclosed in plaintiff's patent. Thus, as a matter of law, defendant's Michigan devices are not covered by plaintiff's patent and do not incorporate any protectible property right of the plaintiff. Furthermore, not only are defendant's Michigan devices not covered by the claims of plaintiff's patent, but these devices spring entirely from the prior art. This is clearly seen in Fig. 4 on the opposite page wherein the apparatus for supporting bearings of defendant's Michigan gyros are compared with the prior art devices and the preferred embodiment of plaintiff's patent.

Plaintiff has no protectible property right under the United States Patent Laws and defendant has received no benefit based upon plaintiff's patent rights for the above four reasons, that is, invalidity of plaintiff's patent based upon (1) anticipation and also based upon (2) obviousness and (3) the non-coverage of defendant's devices by the claims of plaintiff's patent, and (4) the fact that defendant's devices spring entirely from the prior art, *i.e.*, the devices are built wholly according to the teaching of the prior art and everything necessary to their conception and construction is taught by the prior art.

Thus, in the absence of any benefit, the defendants have no obligation to the plaintiff under any theory, including the breach of contract and unjust enrichment theories, advanced by the plaintiff. (p. 24)

The only proper issue before the court in connection with plaintiff's breach of contract theory based

upon the written license agreement was whether the plaintiff obtained a valid patent having substantial claims that were to be in plaintiff's patent application pursuant to the executory contract or license agreement. This issue arises because plaintiff asserts that defendant breached the agreement when defendant sent the notice of September 10, 1957 [Ex. 36] in which defendant repudiated any obligation to pay royalties on the Michigan products or steel gyros. (p. 61)

Similarly, in the present case, in considering the liability on the part of the defendant prior to the termination of the license agreement the court should consider whether the plaintiff obtained a valid patent having substantial claims covering defendant's products in accordance with the license agreement. Thus, the primary determinative issue is: Was the plaintiff able to perform under the executory license agreement and did the plaintiff procure a patent including the claims pres-
(p. 63)

ent in the application when the license agreement was entered into on Sept. 15, 1955. Ancillary to these questions are the questions of validity and coverage of plaintiff's patent which are determinative of the issues under plaintiff's count of breach of the express license agreement.

The trial court in the present action found that the claims of plaintiff's patent covered apparatus for supporting bearings that was not new or novel as required by 35 U.S.C. §§101 and 102, and that the claims failed to meet the test of unobviousness of 35 U.S.C. §103.

The trial court noted that the standard of patentability is a Constitutional standard and is a question of law [Clk. Tr. p. 2085, lines 6-12 and lines 27-30].

These rulings were made as an incident to the interpretation of the license agreement [Ex. 8] concerning plaintiff's patent application, and as an incident to ascertainment or whether or not there was any consideration or protectible property right to form a basis for liability after termination of the license agreement. Both plaintiff's assertions and defendant's defenses have placed the validity and infringement of plaintiff's patent claims in issue. (p. 64)

In the present action there are four main issues which are determinative of the case in accordance with the decision of the trial court. All of these issues are questions of law. These issues are:

(1) the construction of the written license agreement of September 15, 1955, which formed the basis for plaintiff's first cause of action;

(2) the performance by the paintiff under this executory agreement or the failure of consideration of the executory agreement, all of which is set forth in the file history of plaintiff's patent application [Ex. P] and the various issued patents of record which show the prior art;

(3) the validity of plaintiff's Patent No. 2,919,586 [Ex. 10]. (p. 78)

Thus, it is seen that defendant never operated as a licensee under any allowed claims in the patent application; defendant never operated as a licensee under any of the claims in the application as originally filed because none of these claims were ever allowed; defendant never received any benefit from the license agreement; and defendant terminated the agreement in accordance with its express provisions approximately nine months before the patent issued so that defendant was

never a licensee under the patent. By the termination defendant assumed the legal status of a stranger which new status removes all estoppel against defendant as an erstwhile licensee with regard to contesting the validity of the patent. (p. 108)

A. Plaintiff's Patent Is Invalid Under the United States Patent Laws Because of Anticipation, Obviousness, and Late Claiming.

The United States Patent Laws provide in pertinent parts:

"§ 101. Inventions patentable

"Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

"§ 102. Conditions for patentability; novelty and loss of right to patent

"A person shall be entitled to a patent unless—

"(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or

"(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, or

* * *

"(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or

* * *

"§ 103. Conditions for patentability; non-obvious subject matter (p. 128)

"A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made."

The lack of patentability based upon prior art under §102 is generally and properly referred to as anticipation. Statutory bars including late claiming, *i.e.*, presenting the invention in an application to the United States Patent Office more than one year after public sale or public disclosure of the invention, is also part of §102 although not generally considered to be covered by the term "anticipation."

Muncie Gear Works, Inc. v. Outboard Marine & Mfg. Corp. (1942), 315 U.S. 759;

Aetna Steel Products Corp. v. Southwest Products Co. (9 Cir. 1960), 282 F. 2d 323.

The lack of patentability under §103 of Title 35 of the United States Code is properly referred to as obviousness.

There is a distinction between the two conditions of patentability under § 102 and § 103. If a patent is anticipated (§102), it is invalid for lack of novelty, but a patent is invalid for lack of invention if it would have been obvious (§103). (p. 129)

This method claim, as well as all others, were rejected by the Patent Office. This rejection was acquiesced in by the plaintiff and all method claims were cancelled [pp. 70 and 71 of Ex. P]. No method claims were allowed and only apparatus claims appear in the issued patent [Ex. 10].

Plaintiff's apparatus claims cannot now be broadened to include the method of assembly or to be read as method claims. Plaintiff's method claims having been eliminated from his application, the plaintiff may not now expand the apparatus claims to include the eliminated claims. A similar situation occurred in the case of *Bacon American Corporation v. Super Mold Corporation of California* (N.D. Cal. 1964), 229 F. Supp. 998, wherein the owner of the patent attempted to expand apparatus claims to include a method. (p. 153)

With plaintiff's invention as construed by the court in mind, it is clear that this apparatus for supporting bearings does not rise to the level of invention required for combinaton claims to meet the constitutional standard noted in the case of *Great Atlantic & Pacific Tea Company v. Supermarket Equipment Corp.* (1950), 340 U.S. 147.

D. Plaintiff Has No Invention Over the Prior Art — No New or Unusual Results Flow From the Aggregation of Old Elements — the Patent Is Invalid Because of Anticipation and Obviousness.

Plaintiff's apparatus for supporting bearings as set out in claim 9 of Patent No. 2,919,586 is clearly unpatentable as a matter of law in view of that part of the prior art that includes only earlier patents. (p. 159)

That is, the claims of the patent must always be explained by and read in connection with the specifications and in the light of definitions and admissions made by the applicant in the proceeding in the Patent Office. *Moon v. Cabot Shops, Inc., supra,* at age 543. It is well established that the claims must be read and interpreted in the light of the claims which have been rejected. Claims which have been allowed cannot, by construction, be read to cover what has thus been eliminated from the patent. *Oregon Saw Chain Corp. v. McCulloch Motors Corp., supra,* at 768; *McCulloch Motors Corp. v. Oregon Saw Chain Corp.* (S.D. Cal. 1964), 234 F. Supp. 256. (p. 210)

Additionally, a patentee cannot regain by recourse to the doctrine of equivalents that which he has disclaimed. (p. 211)

This amendment clearly did constitute new matter and should not have been included in the specification. *35 U.S.C.* §§ 102, 132; *Muncie Gear Works, Inc. v. Outboard Marine & Mfg. Corp.* (1941). (p. 215)

Thus, in accordance with the requirements for patentability found in Title 35 of the United States Code, §102, if the replaceable bearings or interchangeable

mounting was the point of novelty it could not be claimed at this late date.

Muncie Gear Works, Inc. v. Outboard Marine & Manufacturing Company (1941), 315 U.S. 759; (p. 219)

After the court has construed the claims in light of the specification and drawings and file wrapper history the next step in determining the proper scope to be given to those claims is to look at the prior art. This is so because the claims of a patent must be limited to not cover prior art devices because the claims would be invalid if they covered any prior art devices.

Moon v. Cabot Shops, Inc. (9th Cir. 1959) 270 F. 2d 539; (p. 223)

With reference to an agreement based upon claims of an application for a patent, in *Baldwin Rubber Co. v. Paine & Williams Co.* (6th Cir. 1939), 107 F. 2d 350, the court stated at page 354:

"... Passing the precise question as to whether the licensee is bound by claims which had no existence and were not in the application when the license agreement was executed, it would seem to us that since the licensee is not estopped from considering the scope of patent claims in the light of prior art, and when so considered claims may be so narrowly construed as to fail to cover the licensee's articles, practices or machine, it must follow that when claims are so broad as to comprehend all prior art the licensee who contracted for the use of an invention, and not for art in which the licensor had no monopoly, is not bound and that this does no violence to the rule of estoppel which forecloses challenge by the licensee to the

validity of a patent. If this were not so, a licensor, in a license granted upon an application, might include in amended claims every article manufactured and every practice or machine employed by the licensee, whether germane to the invention or not. Westinghouse Electric & Manufacturing Co. v. (p. 255)
Formica Insulation Company, 266 U.S. 342, 351, 45 S. Ct. 117, 69 L. Ed. 316; Noonan v. Chester Park Athletic Club Co., 6 Cir., 99 F. 90."

In view of the fact that the claims of a patent application can be changed, a licensee under such claims requires certain safeguards. The safeguards in the present license agreement are the cancellation provisions of paragraphs 2(a) and 6 of the agreement.

The plaintiff alleged that he had done everything on his part to be performed under the license agreement of September 15, 1955 [Plaintiff's Complaint—Clk. Tr. p. B-4, lines 13-14]. The defendant generally denied this allegation by its answer filed February 9, 1960 [Clk. Tr. p. B-26, lines 23 and 24].

The issue of full performance by the plaintiff under the license agreement of September 15, 1955 [Ex. 8] was preserved in the pretrial conference order filed January 20, 1964 [Clk. Tr. p. 1402, lines 2-3].

Failure of the plaintiff to perform, or conversely, the refusal of the United States Patent Office to issue a patent on the substantial claims of plaintiff's patent application Serial No. 410,237 would constitute a failure of consideration for the continuing obligation to pay royalties on products incorporating a patentable invention of plaintiff under the executory license agreement. This failure of consideration is independent of the orig-

inal consideration whereby, the license agreement was signed and defendant paid the plaintiff over $1,000. (p. 256)

Therefore, there was a failure of consideration with respect to any and all possible obligations on defendant's Michigan products. Therefore, judgment notwithstanding the verdict with respect to the Michigan products was proper and should be affirmed. (p. 270)

DEFENDANT WAS SUBSTANTIALLY PREJUDICED BY THE COURT'S REFUSAL TO CONSIDER THE ALLEGATIONS OF FRAUD ON THE PATENT OFFICE IN THE PROCUREMENT OF PLAINTIFF'S PATENT.

The defendant made a motion for leave to file an amended answer asserting the affirmative defenses of fraud and deceit with respect to both the first and the second causes of action [Clk. Tr. p. 149]. In the amended answer it was asserted that during the preparation and prosecution of plaintiff's patent application Serial No. 410,237 in the United States Patent Office plaintiff enlarged his description and claims from time to time in an attempt to cover developments which were not his own for which he was not entitled to cover, and which in fact were the independent development of other employees of the defendant [Clk. Tr. p. 155, line 30, to p. 156, line 3].

In this amended answer it is also asserted that on August 7, 1959, and December 24, 1959, that the plaintiff filed affidavits in the United States Patent Office falsely stating that the enlarged disclosure and altered claims were part of his original invention. These affidavits were submitted to the Patent Office by defend- (p. 389).

ant's former patent agent, Perry Turner [Ex. P, pp. 171-184]. These acts constituted fraud on the United States Patent Office and on the public as well as on the defendant and this fraud bars any cause of action involving the patent application or Patent 2,919,586 [Ex. 10] which eventually issued on the patent application (p. 390)

Furthermore, judgment for the defendant notwithstanding the verdict was proper and should be affirmed because as a matter of law the plaintiff has no protectible right under the United States Patent Laws, and there is no basis upon which to impose liability on the defendant, because a mere comparison of plaintiff's patented apparatus for supporting bearings with the devices of the prior art leads to the only reasonable conclusion of invalidity of plaintiff's patent. (p. 400)

4. *Excerpts From:*

PETITION FOR REHEARING IN THE CALIFORNIA SUPREME COURT.

RESTRAINT OF TRADE, THE POSSIBILITY THAT AN APPLICANT FOR A PATENT MAY CHANGE HIS CLAIMS DURING PROSECUTION, REPUDIATION OF AN AGREEMENT FOR FAILURE OF CONSIDERATION, AND THE PUBLIC POLICY WHERE PATENTS ARE CONCERNED WERE NOT CONSIDERED BY THIS COURT IN APPLYING THE DOCTRINE OF LICENSEE ESTOPPEL.

(p. 10)

A. THE DOCTRINE OF LICENSEE ESTOPPEL DOES NOT APPLY WHERE THE LICENSE CONTAINS A PROVISION IN RESTRAINT OF TRADE.

The decision (p. 32) construes the license agreement [Ex. 8] to require that Lear must cease manufacturing the products of the license in order to terminate the agreement.

This constitutes a restraint of trade which is void and unenforceable under federal law, the common law, and

(p. 10)

California law. Business and Professions Code §16600.

The doctrine of licensee estoppel does not apply where the license contains a provision in restraint of trade. Such a restraint is a violation of the law save only as it is within the protection of a lawfully granted patent. That is, *an absolutely valid patent is required,* which *satisfies the Constitutional standard required for patentability,* not just a presumptively valid patent.

In *Sola Electric Company v. Jefferson Electric Company,* 317 U.S. 173 (1942) the court considered a pat-

of consideration. This issue is raised by Lear's letters of September 10, 1957 [Ex. 36] and April 8, 1959 [Ex. 39]. This issue is also raised in the litigation proceedings. Failure of consideration is pleaded specifically [Clk. Tr. 1655].

In *Mudgett v. Thomas*, 55 Fed. 645 (S.D. Ohio 1893), the court reviewed the history of licensee estoppel and stated at pages 648 and 649:

> ". . . when a licensee stands out from under the license, and claims nothing from it, with full knowledge by the licensor of his position, he would appear to be at as full liberty to contest the patent as any one . . ."
>
> '. . . It would be against public policy to extend the doctrine of estoppel beyond the strict letter (p. 16)
>
> of the rule, for in Pope Manufacturing Co. v. Gormully, 144 U. S. 234, 12 Sup. Ct. Rep. 632, Justice Brown says: 'It is as important to the public that competition be not repressed by a worthless patent, as that the patentee of a really valuable invention should be protected in his monopoly.'"

Thus, irrespective of whatever termination provisions are employed in a license agreement, if the licensee refuses to be bound by the agreement and does not operate under it, he may thereafter contest the validity of the patent in an action for breach of contract. Such is the case here. (p. 17)

In *Crew v. Flanagan*, 65 N.W. 2d 878, 102 U.S.P.Q. 324 (Minn. Supreme Court 1954) the court considered the issue of failure of consideration and held that licensee estoppel does not apply to that issue when the

license is repudiated. The Court reviewed many authorities and stated:

> ". . . But the view now supported by the weight of authority in recent cases is that the licensee may dispute the validity of the patent under which he is licensed after he has repudiated the license, even though such patent has not been shown to be invalid in third-party proceedings." (p. 18)

The license in the *Crew* case had no provision permitting termination and it was to continue for the term of the patent. Thus, the *Crew* license was not terminated in accordance with the provisions of the agreement. The licensee refused to be bound by the agreement and successfully defended on the basis of invalidity of the patent.

The decision in the present case conflicts directly with that of the *Crew* case.

The *Crew* case involved an exclusive license. The same conclusion was reached with respect to a non-exclusive license in *Viki Hosiery Corporation v. Margulies,* 164 F. Supp. 738 (E.D. Pa. 1958) (p. 19).

C. THERE IS NO ESTOPPEL WITH RESPECT TO CLAIMS THAT WERE INSERTED IN THE PATENT APPLICATION SEVERAL YEARS AFTER THE LICENSE AGREEMENT WAS CONSUMMATED.

The license agreement was consummated in 1955, additional matter was added to the application by an amendment filed on December 22, 1958, Lear served a notice of termination on April 8, 1959, and the claims in suit were inserted in the application by amendment which was filed on April 30, 1959. These claims were different from prior claims in that they contained the

express limitation that the respective elements of the apparatus had to have a mounting surface and a supporting surface and that the cooperation between the surfaces must permit the bearing-receiving elements to be initially adjustably shifted into oriented positions where the bearing-receiving means would be in alignment with each other.

The prosecution of the patent application was under the exclusive control of Adkins. Lear never saw the claims which issued until the patent became a public document in January, 1960.

Lear did not operate under the license agreement after these claims were inserted, Lear has derived no competitive advantage or monopoly rights under these claims, Lear has asserted over and over that these claims are invalid, Lear could never derive a benefit from this creation of new claims which took place some four years after the executory contract was consummated, which claims have been held invalid as a matter of law.

In *Westinghouse Electric & Manufacturing Company v. Formica Insulation Co.*, 266 U.S. 342 (1942) the

(p. 20)

court considered an assignor's estoppel with reference to assignment of a patent application, as distinguished from an issued patent. The court observed that since the claims could be changed, it might be that the limits of the subsequent estoppel should be different than in case of a granted patent. However, the court did not find it necessary to decide this.

Estoppel with respect to a license is less stringent than estoppel with respect to an assignment. The subsequent estoppel, when a license agreement involving a patent application is involved, should not extend to new

claims, and particularly it should not extend to new claims that are first presented after the licensee ceased to operate under the agreement. There is no equitable reason for the estoppel to apply, and estoppel is an equitable defense. (p. 21)

A REQUIREMENT THAT LEAR MUST CEASE MANUFACTURING PRODUCTS OF THE LICENSE AGREEMENT IN ORDER TO TERMINATE IT IS CONTRARY TO THE RIGHTS OF THE PARTIES AND AGAINST PUBLIC POLICY.

This Court has construed the agreement to include an implied condition that Lear must cease manufacturing before it can exercise an otherwise unequivocal termination provision [§2(a)] which only requires ninety days' written notice. It is respectfully submitted that this implied condition is directly contrary to the rights of the parties, apart from the agreement, and improperly extends Adkins' patent monopoly in violation of public policy concerning patents and patent rights as established by the U.S. Supreme Court. (p. 55)

The subject matter of the license agreement is patentable invention. The consideration recited by the agreement is the grant of a license under the patentable claims [Ex. 8, §1(d), 2(a)]. Adkins so represented to Lear [Exs. U and A-85 for identification].

Thus, the subject matter of the license agreement is patent rights.

Many years ago, a patent license agreement could subject a licensee to substantially any qualification or provision that the licensee would accept. *Henry v. A. B. Dick Co.*, 224 U.S. 1 (1912).

ent license agreement having a price fixing provision which is a violation of the law unless it is saved by the license agreement.

The Court held the restriction a violation of the law save only as it is within the protection of a lawfully granted patent monopoly. The Court then held that licensee estoppel does not apply under such circumstances and that the validity of the patent could be contested.

In *Katzinger v. Chicago Metallic Mfg. Co.*, 329 U.S. 394 (1947), the court went even further and held that licensee estoppel does not apply where there is price fixing, even though there was a covenant in the license contract that the licensee would not contest validity of the patent.

Another case involving price fixing is *MacGregor v. Westinghouse Electric & Manufacturing Company*, 329 U.S. 402 (1947), where the court held that licensee estoppel is not applicable, stating:

> ". . . If it be determined on remand that the patent is invalid, there is no question but that, as MacGregor contends, the price-fixing agreement violates the anti-trust laws." (p. 11)

In *Nachman Spring-Filled Corporation v. Kay Mfg. Co.*, 139 F. 2d 781 (2nd Cir. 1943), the defendant, to settle a prior suit, agreed to cease making and selling for thirteen years a product covered by plaintiff's patent. Defendant further agreed to acknowledge validity of the patent. Plaintiff brought an action for breach of the agreement and the defendant contested the validity of the patent. The court held that since the agreement imposed a restraint on trade in that it required the defendant to cease manufacturing products, the defendant was not estopped to contest the patent even though it had agreed not to contest it (p. 12)

B. LEAR CAN CONTEST THE VALIDITY OF ADKINS' PATENT BECAUSE LEAR REPUDIATED THE LICENSE FOR FAILURE OF CONSIDERATION.

The consideration recited in paragraph 2(a) of the license agreement is the grant of a license under the claims of Adkins' patent application which "are patentable or will be patentable by Adkins". (p. 14)

The decision (pp. 17-28) states that the agreement does not require *validly* patented claims (p. 24), and that the parties intended to license "any patent" which issued on the basis of Adkins' application.

Thus, the decision appears to rest upon a holding that validity or invalidity of the patent is immaterial because the parties contracted with reference to just "any patent" that might issue.

> "It is the public interest which is dominant in the patent system."
>
> *Mercoid Corp. v. Mid-Continent Invest. Co.*, 320 U.S. 661 (1944).

It is in the public interest to assure that only valid patents issue. The mere existence of a patent which is invalid may deter others from employing the invention of the patent, thereby resulting in an unlawful restraint of trade.

If the agreement here is interpreted to mean that the agreement might be based upon an invalid patent, it would enable Adkins or Adkins and Lear together to perpetrate a fraud on the public by obtaining an invalid patent. (p. 15)

However, the decision fails to consider the refusal of Lear to be bound by or operate under the agreement, and the repudiation of any liability because of failure

This is no longer true. The law favors free competition without restraints, and the rights granted by the patent laws are an exception to the usual rules of free competition.

The exceptions to the common law and statutory rules of free competition provided by the patent laws have been greatly reduced over the last half-century by a long series of decisions by the U.S. Supreme Court. (p. 59)

Today it is unlawful for a patent owner to attempt to extend the scope of the patent monopoly beyond the scope of the patent laws.

> "A patent by its very nature is affected with a public interest. As recognized by the Constitution, it is a special privilege designed to serve the public purpose of promoting the 'Progress of Science and useful Arts.' At the same time, a patent is an exception to the general rule against monopolies and to the right to access to a free and open market. The far-reaching social and economic consequences of a patent, therefore, give the public a paramount interest in seeing that patent monopolies spring from backgrounds free from fraud or other inequitable conduct and that such monopolies are kept within their legitimate scope. The facts of this case must accordingly be measured by both public and private standards of equity."
>
> *Precision Instrument Manufacturing Company v. Automotive Maintenance Machinery Company,* 324 U.S. 806, 816 (1944).

"The grant of a patent is the grant of a statutory monopoly . . . the prerequisites to obtaining

a patent are strictly observed, and when the patent has issued the limitations on its exercise are equally strictly enforced . . . Once the patent issues it is strictly construed . . . . it cannot be used to secure any monopoly beyond that contained in the patent . . ."

Sears, Roebuck & Co. v. Stiffel Co., 376 U.S. 225, 229-230 (1964). (p. 60)

"But patents are in the federal domain; and 'whatever the legal device employed' (Scott Paper Co. v. Marcalus Co., supra, 362 US at 256, 90 L ed at 57) a projection of the patent monopoly after the patent expires is not enforceable."

Brulotte v. Thys Co., 379 U.S. 29, 13 L. Ed. 2d 99 (1964).

Use of an agreement to project patent rights beyond those provided by law constitutes misuse of the patent and renders both the agreement and the patent unenforceable. See "Patent Law" by Arthur M. Smith and Robert L. Harmon (1964), p. 1198.

An agreement (either express or implied) which requires Lear to cease manufacturing the devices of Adkins' patent application or patent in order to terminate the license agreement projects the patent rights beyond those provided by law in violation of the above authorities.

The license agreement was consummated while Adkins' patent application was pending in the Patent Office, and Lear's notice of termination was served in 1959 while the application was still pending. Adkins had no property rights at that time, either at common law or by state law. *Summerhays v. Scheu*, 10 Cal. App. 2d 574, 576 (1935). (p. 61)

An agreement to cease manufacturing products asserted to be covered by a patent in order to terminate the agreement deprives the licensee of the right to contest the patent forever. This requires the licensee to agree in advance that it will either cease manufacturing the devices (in which case there would be no reason or basis for contesting the patent because there would be no justiciable controversy) or that it will operate under the license agreement and hence be estopped to contest the patent. Such a requirement by agreement constitutes an unlawful extension of the patent rights in violation of the above authorities. This is particularly true where the agreement is based upon claims of a patent application which were changed substantially during the pendency of the patent application in the Patent Office.

Whatever the legal device employed, express agreement or implied condition, if it runs counter to the policy and purpose of the patent laws, it is prohibited. *Scott Paper Co. v. Marcalus Mfg. Co.*, 326 U.S. 249, 256 (1945).

The use of a condition implied under state law is also condemned by *Sears, Roebuck v. Stiffel Co., supra*, where the Court stated at page 231:

> "Just as a State cannot encroach upon the federal patent laws directly, it cannot, under some other law, such as that forbidding unfair competition, give protection of a kind that clashes with the objectives of the federal patent laws." (p. 62)

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IN THE

Supreme Court of the United States

October Term, 1967
No. 1303

LEAR, INCORPORATED,

Petitioner,

vs.

JOHN S. ADKINS,

Respondent.

VOLUME I.
BRIEF FOR RESPONDENT IN OPPOSITION.
(Appendix in Volume II)

Introduction.

This case is a suit by John S. Adkins ("Adkins"), an inventor, against Lear, Incorporated ("Lear"), a major corporation, which involves one patent and one license agreement only. After a lengthy jury trial, the jury unanimously found the patent to be both valid and infringed and rendered its verdict for Adkins. After intermediate proceedings in the trial court and the first appellate court which will be explained hereinafter, the California Supreme Court reinstated the judgment on the jury verdict. The determinative issues in the California Supreme Court were the construction of the license agreement (which both parties agreed was not ambiguous), the enforcement of the doctrine of licensee estoppel, and the application of the Federal rules relating to infringement to the uncontradicted facts. A large portion of Lear's petition is no more than an effort to persuade this Court to interpret the license agreement contrary to the construction placed upon it by the

California Supreme Court, and to induce this Court to apply the Federal rules relating to infringement on the issues of alleged new matter and file wrapper estoppel differently than did the California Supreme Court. The remaining part of Lear's petition is simply an attempt to avoid the settled doctrine of licensee estoppel by (a) incorrectly asserting that it is inconsistent with the patent laws; (b) raising a non-existent restraint of trade argument; (c) raising an issue of State law relating to consideration for contracts; (d) raising a purely hypothetical issue concerning the difference, if any, beteen a license under a patent application and a license under an issued patent; and (e) raising a clearly erroneous argument pertaining to so-called antedating of the patent monopoly to the claims of the application. As will be shown in detail hereinafter, these questions were not properly or timely raised below, and none has any substantive merit or is of sufficient importance to justify review by this Court. However, since these questions which are raised by Lear are all directed to its belated assertion that during the existence of the license agreement it should not have been estoppel to question the validity of Adkins' patent, it is worth noting at the outset that had it been necessary for the California Supreme Court to decide the issue of validity on the merits (the jury having unanimously found the patent to be valid), it would have unquestionably held that Adkins' patent is valid.

In this regard, the California Supreme Court, after considering the prior art patents (A-37-38)[1] and con-

[1]References herein to the record, the briefs of the parties and the opinions below will be made as follows: "A", "B", "C" and "D" followed by a page number will refer to Lear's Appendix; "E" through "N" followed by a page number will refer to Adkins' Appendix to this Brief in Opposition; "C. T." followed by a page number will refer to the Clerk's Transcript; "R. T." followed by a page number will refer to the Reporter's Transcript; "Ex." followed by a number will refer to exhibits admitted in evidence.

cluding on uncontradicted evidence, as did the jury, that Lear was not building the five gyros in issue according to the prior art patents, considered either singly or in combination and together with the application of ordinary mechanical skill (A-38), stated that "Adkins nevertheless makes a significant step forward in the innovation and utilization of the cooperative relationship [of the elements of his combination patent]" (A-38). Thus, the above quoted statement decides in Adkins' favor the only question of law on the issue of validity after the jury has found the patent to be valid, *Graham v. John Deere Co.* (1966), 383 U.S. 1, *United States v. Adams* (1966), 383 U.S. 39.

Opinions Below.

The judgment for Adkins entered on the unanimous verdict of the jury is unreported. The trial court's opinion, granting Lear a judgment notwithstanding the verdict and a new trial in the alternative, is unofficially reported at 143 USPQ 53. The opinion of the California District Court of Appeal is set forth at 244 A.C.A. 100, 151 USPQ 119, and is modified at 244 A.C.A. 563. The opinion of the California Supreme Court is reported at 67 A.C. 911, 156 USPQ 285.

Jurisdiction.

Adkins admits that Lear asserts a "right" under Federal statutes within the meaning of 28 USC §1257, subd. (3). However, Adkins denies that this Court has jurisdiction under either Art. I, Sec. 8, Cl. 8, of the Constitution or under 35 USC §§101, 102(a), (b), 103, 115, 132, 154 or 282, or under 15 USC §1,

or under 28 USC §1498,[2] in that Lear has completely failed to properly or timely raise any substantial Federal question under any of said statutes, as explained in greater detail hereinafter.

Questions Presented.

In order to invoke the jurisdiction of this Court, the question presented must be a substantial Federal question, Rule 19-1(a), *Beck v. Washington* (1962), 369 U.S. 541, 551-555, and a question which has not been decided by prior United States Supreme Court decisions, *Palmer Oil Corp. v. Amerada Petroleum* (1952), 343 U.S. 390, *Consolidated Turnpike v. Norfolk etc. Ry. Co.* (1913), 228 U.S. 569, *Equitable Life Assurance Society v. Brown* (1902), 187 U.S. 308. It cannot be a question presented for the first time to the highest State court on petition for rehearing, *Hanson v. Denckla* (1958), 357 U.S. 235, 244, *Radio Station WOW v. Johnson* (1945), 326 U.S. 120, 128, unless the highest State court entertains the petition and decides the question,[3] *Radio Station WOW v. Johnson, supra,* or unless the decision was a surprise which could not have been anticipated, *Herndon v. Georgia* (1935), 295 U.S. 441. *A fortiori,* a question first presented to this Court in a petition for a writ of certiorari comes too late for consideration, *Hanson v.*

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[2]Adkins does not believe that Lear seriously contends that his sole remedy is to sue the United States in the Court of Claims under 28 USC §1498, since that statute expressly excludes products manufactured for the Government under a license from the patent owner. Thus, Adkins will not consider this to be one of the questions presented.

[3]"It is the settled rule of [the California Supreme] Court that points made for the first time on petition for rehearing will not be considered." *A. F. Estabrook Co. v. Industrial Acc. Com.* (1918), 177 Cal. 767.

Denckla, supra. The question presented to this Court under a Federal statute must not differ from the question presented under that statute in the lower courts, *Hanson v. Denckla, supra.* The question must be squarely raised as a Federal question and not just mentioned in passing in the lower courts, *Beck v. Washington, supra,* and must not be one which was abandoned in the lower courts, *Beck v. Washington, supra.* Finally, the question presented must be a Federal question and not a question which relates only to the construction of or consideration for a license agreement which are questions of State and not Federal law, *Dale Tile Manufacturing Co. v. Hyatt* (1888), 125 U.S. 46, *Scott v. Platt* (1943), 171 Ore. 379, 137 P. 2d 975, *St. Paul Plow Works v. Starling* (1891), 140 U.S. 184.

Although Lear asserts that there are only five questions presented, Lear in fact presents seven different questions, some of which raise subsidiary questions. All questions require restating for proper consideration because in stating the questions, Lear has either combined anti-trust and patent questions with purely State questions (Lear's questions 1 and 2), or stated the same question twice (questions 3 and 4), or stated the question so broadly as to be completely vague (question 5).

Separately and fully stated, the questions which are presented by Lear, and which violate one or more of the foregoing rules, are as follows:

1. Whether the doctrine that a licensee is estopped to contest the validity of his licensor's patent, absent any misuse of the patent, is contrary to the Federal patent statutes.

(This question was raised for the first time in the within petition. Prior thereto, Lear expressly abandoned this issue in the District Court of Appeal and the California Supreme Court by stating (E-1): "It is a recognized principle of law that when a license agreement provides a grant of a right to either manufacture, use or sell a product incorporating a patented invention, the licensee is estopped to contest the validity of the licensed patent only as long as the licensee is operating the license. . . . This estoppel lasts only so long as the licensee operates under the license agreement. This estoppel arises not because of express terms in the agreement but because the licensee is using and enjoying the benefit and protection of the rights covered by the agreement and should not be permitted to reap the benefits of the agreement and at the same time contest the validity of the patents to show failure of consideration for the agreement.")

2. Whether the doctrine that a licensee is estopped to contest the validity of his licensor's patent is contrary to the Sherman Act where the license agreement provides that the licensee must pay royalties where he manufactures devices covered by the patent.

(This issue was raised for the first time in Lear's Petition for Rehearing in the California Supreme Court, which was denied without a hearing. In that petition Lear stated only that the Court's construction of the license agreement violated "Federal law, the common law and California law" (p. 10), without any express mention of the Sherman Act. Although Lear urges that it could not

have anticipated that Court's ruling that the purpose of the paragraph 2(a) termination clause was to permit Lear to terminate the license agreement and thereby avoid paragraph 3(g) minimum annual royalties in the event Lear ceased manufacture and sale of covered gyros, the precise construction adopted by that Court was urged by Adkins in his Pretrial Statement of the Issues [C. T. p. 1417, lines 6-14] on October 23, 1963, again in his Trial Brief [C. T. pp. 2319-2322; F-1-3], again in two of his briefs in the District Court of Appeal (G-1-16), and again in his Petition for Hearing in the California Supreme Court (H-1-5). Lear's only argument in opposition was that it had effected a paragraph 2(a) termination under its construction of the license agreement (I-1-13).)

3. Whether a licensee may always repudiate and stand out from under the license agreement and then contest the validity of the patent on the theory that if the patent is invalid the consideration for the license agreement fails.

(Although this question was raised by Lear in one brief in the District Court of Appeal (I-1-26), it was raised only in passing and as a State and not as a Federal question. At D-161 Lear first refers to page 52 of its brief where the quoted matter on this question appears under the heading "The License Was Terminated on April 8, 1959 and Was of No Force or Effect After That Date" (I-1). Then Lear jumps to page 58 in an effort to show that it raised the issue as a Federal question. However, the remarks on that page

regarding "statutory patent rights" were under a different heading on page 57 entitled "No Protectible Property Rights Exist for Plaintiff Subsequent to Termination of the License Agreement Other Than His Rights Under the United States Patent Laws" (I-19). In that section Lear was not discussing repudiation, but, rather, the effect of *Sears, Roebuck & Co. v. Stiffel Co.* (1964), 376 U.S. 225, on a State theory of unjust enrichment under *Seagren v. Smith* (1944), 63 Cal. App. 2d 733, after termination of the license agreement. In this regard, see Rule 15(a) (J-1) of the California Rules on Appeal, which provides that although "technical 'assignments of errors' " are not required, "[e]ach point in a brief shall appear separately under an appropriate heading, with subheadings if desired.")[4]

4. Whether the doctrine that a licensee is estopped to contest the validity of his licensor's patent is any different where the license is initially under a patent application and then shifts to a license under the claims of the issued patent.

(In the District Court of Appeal, Lear argued that it was "the law of California" (D-164) that where the license begins under an application, the licensee is free to contest the validity of the issued claims. In the within petition Lear asserts for the first time that this is a Federal question.)

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[4]In many of the references Lear makes to the record and to its many briefs in the California courts, Lear employs the same device of improperly connecting statements from arguments on different and unrelated questions in an effort to show that the questions here presented were timely and properly raised. Unfortunately, space considerations do not permit Adkins to expose every such instance.

5. Whether the license agreement violates either the patent laws or the Sherman Act by requiring the licensee to pay royalties during the pendency of the patent application.

(This issue was first raised in the within petition. In the trial court [R. T. p. 1017, lines 1-5; p. 1019, line 19, to p. 1020, line 1], the District Court of Appeal (K-1-3) and the California Supreme Court, Lear argued only that under its construction of paragraph 6 of the license agreement, it could unilaterally anticipate final Patent Office action, determine (even if incorrect) that no claims covering the gyros in issue could issue, and terminate the license agreement.)

6. Whether Adkins inserted any new matter in the specifications, and, if so, whether or not this constitutes fraud on the Patent Office precluding recovery, in a State court, of royalties due under a license agreement.

7. Whether the California Supreme Court, after properly stating the doctrine of file wrapper estoppel, correctly applied it to the facts in this case.

Statement of the Case.

Lear has not fairly or accurately set forth the material facts and has substantially misconstrued the opinions of the trial court, the California District Court of Appeal and the California Supreme Court. As a consequence, Adkins is required to restate the material facts and the true holding of the opinions below in order to properly present this case.

At page 5 of its petition Lear states, without citation to the record, as required in *Furness, Withy &*

Co. v. Yang-Tsze Ins. Ass'n. (1917), 242 U.S. 430, 434, that Adkins "left the Air Force and went to work for Lear." Unfortunately, the record does not show the exact date that Adkins left the Air Force, but, as Lear well knows (from pages 103 and 116 of Adkins' deposition) (L-1-2), Adkins left the Air Force in April of 1951 and accepted employment with the Schwein Engineering Company, where he remained until early December of 1951. Then, on December 29, 1951, Adkins and Lear entered into a simple one-page letter agreement which provided, in substance [C. T. p. B-7, M-1], that Adkins agreed to disclose and license to Lear all "ideas, discoveries and inventions" relating to gyros and Lear agreed to pay Adkins therefor a "mutually satisfactory royalty." On January 2, 1952 [R. T. p. 291, lines 14-16] Adkins began work at Lear's Santa Monica, California, facility known as the Lear-Cal Division [R. T. p. 298, lines 10-13], and began conducting experiments in the hope of developing a gyro of greater accuracy which could be manufactured at lower cost [R. T. p. 2444, lines 5-12; p. 2141, line 22, to p. 2142, line 6]. After first experimenting with [R. T. p. 2456, lines 2-19] and ultimately rejecting self-aligning bearings [R. T. p. 2456, line 1; p. 2458, line 8], Adkins conceived of his invention relating to a fixed bearing construction in approximately August of 1952 [R. T. p. 306, lines 9-12] and built it into a gyro first called the "MA-1 compass gyro" [Ex. 8] and later renumbered by Lear as the 2156 gyro [R. T. p. 312, lines 13-26]. Adkins immediately disclosed his invention to Lear's executive and engineering personnel in California and Grand Rapids, Michigan, both orally and in writing [R. T. p. 307, lines 6-10; p. 2466, lines 24-26; p. 2136, line 13;

p. 2140, line 3; p. 580, lines 5-13; p. 2468, lines 14-21]. After Adkins' disclosure and in September of 1952 [R. T. p. 1763, line 17, to p. 1764, line 11], Lear's Grand Rapids division began experimenting with self-aligning bearings [R. T. p. 1769, lines 1-15], despite Adkins' advice that this approach was unworkable. In the early fall of 1953 [R. T. p. 1731, liine 1, p. 1776, lines 13-17], the Grand Rapids division finally agreed with Adkins, and on October 23, 1953 [R. T. p. 1773, lines 21-26] adopted Adkins' invention and began to use it, first in the 2152 and 2153 gyros [R. T. p. 1731, lines 17-23; p. 2148, line 25, to p. 2149, line 5] and later in the 2151 and 2171 gyros [Ex. 49]. Thus, although Lear claims that it independently developed the "steel gyros," the facts do not support this assertion. The 2151, 2152, 2153 and 2171 gyros became known as "steel gyros" [R. T. p. 2153, line 6, to p. 2156, line 20]. The 2156 gyro, although also made of steel [R. T. p. 2153, lines 6-10], continued to be referred to as the MA-1 gyro or the 2156 gyro. The only difference in the bearing construction between the 2156 gyro and the four steel gyros was the shape of two cooperating elements [R. T. p. 612, lines 17-19]. The difference in shape, however, made no functional difference whatsoever, either in assembling the gyros or in their operation or accuracy [R. T. p. 1783, lines 4-14; p. 614, line 25, to p. 616, line 10; p. 2174, lines 5-9]. Adkins' invention reduced free drift errors from more than 17° per hour on Lear's most accurate gyro [R. T. p. 290, lines 8-11; p. 308, lines 10-13; p. 2545, lines 17-21; p. 2546, lines 19-24] to less than 2°

[5]Since Lear does not state "independent development" to be one of the questions presented and does not discuss it in its argument, Adkins will not further consider it, Rule 23-1-(c).

per hour [R. T. p. 290, lines 5-11; p. 2546, lines 1-24], and in addition substantially reduced the cost of manufacture by eliminating the need for skilled workmen and reducing the number of rejects [R. T. p. 2151, lines 15-20; p. 2179, lines 6-25; p. 2544, lines 12-21]. Furthermore, Adkins' invention permitted the bearings to be easily removed and replaced without requiring realignment of all of the parts [R. T. p. 2401, line 25, to p. 2402, line 6].

In September of 1952, soon after Adkins disclosed his invention to Lear, Lear began negotiations to supplement and implement the letter agreement of December 29, 1951 [R. T. p. 2184, lines 16-24]. These negotiations extended through several preliminary drafts of an agreement and culminated on September 15, 1955, when the parties executed the formal license agreement here in issue (C-125).

Under paragraphs 1(b), 2(a) and 6 (C-128, 129, 138) of the license agreement, Lear licensed (1) the original claims of the application, if patentable (even though, as Lear knew, all claims had then been rejected and amended claims were pending), and (2) any patent (and therefore necessarily its claims) which issued to Adkins for the invention disclosed or intended to be disclosed in the specifications, if the issued claims were "substantial claims." In paragraph 17 (C-146), Lear "agreed" that Adkins' invention was embodied in the 2152 and 2153 steel gyros and the 2156 gyro and that these gyros were covered by the claims of Adkins' patent application. Pursuant to paragraph 3(a) (C-131), Lear agreed to pay Adkins a royalty of 1¼% of the "net sales price" of all gyro products incorporat-

ing Adkins' invention. Paragraph 2(a) stated that Lear could "terminate any one or more of the [three] licenses herein granted" (not the license agreement itself) on 90 days' written notice to Adkins. Paragraph 3(g) contained no termination clause permitting Lear to terminate any of the licenses, and required Lear to pay substantial annual minimum royalties to Adkins "provided the licenses are in force and effect." Paragraph 6 stated that Lear could terminate the license agreement if the Patent Office refused to issue a patent containing "substantial claims."

After paying royalties to Adkins on all of the 2151, 2152, 2153 and 2156 gyro products [Ex. 35, R. T. p. 504, lines 10-25], Lear advised Adkins in writing on September 10, 1957 [Ex. 36] that in its unilateral opinion (which proved to be incorrect when Adkins' patent issued on January 5, 1960), it did not consider the bearing construction employed in the steel gyros to be patentable and refused to pay any further royalties to Adkins on any steel gyro. Adkins took positive exception in writing [Ex. 37], and when Lear persisted in its refusal to pay royalties, Adkins resigned on December 26, 1957, effective February 1, 1958 [Ex. 38]. Under the last unnumbered paragraph of paragraph 11 (C-144) of the license agreement, the license would become non-exclusive six months and fifteen days after Adkins left Lear's employ, unless Lear notified Adkins in writing that it exercised one of the four exclusive license options of that paragraph. It is not disputed that no such notice was ever sent, and thus the license became non-exclusive on August 15, 1968. Thereafter, and on April 8, 1959, Lear advised Adkins in writing that it purported to terminate

the licenses and the license agreement under paragraphs 2(a) and 6 thereof (C-150). Adkins again objected in writing (C-151).

On January 5, 1960 Adkins' patent issued [Ex. 10] and on the same day the within action was filed [C. T. p. B-1]. By stipulation, the period of damages included from January 1, 1955 to May 31, 1963 [R. T. p. A-1748, line 19, to p. A-1749, line 26]. Lear also stipulated that both before and after its letters of September 10, 1957 and April 8, 1959, it continued without interruption to manufacture the gyros in issue [C. T. pp. 1134-1135]. During the stipulated damages period, Lear's sales totalled $67,576,755.00 [Ex. 48, 49]. Although Lear asserts in its petition that substantially all of its sales were to the military, no support for this statement can be found in the record. While it is not denied that some part of Lear's total sales was made to the military, the record does not show whether the percentage of sales to the military was 1% or 99% of the total sales, as the trial court, on Lear's motion [C. T. p. 33, lines 16-19, R. T. p. A-15, lines 1-26], ordered that the names of Lear's customers be withheld from Adkins [C. T. p. B-35, lines 23-24] on the ground that they were trade secrets. Thus, in answering Adkins' interrogatories and setting forth sales information, Lear gave each purchaser a "customer code" number. These numbers are 1 to 54, indicating that Lear had 54 different customers. It is hardly likely that all 54 are the military.

Between the dates of March 13, 1964 [R. T. p. 270, line 15] and May 4, 1964 [C. T. p. 1724] the matter was tried before a jury. Under proper instructions [R. T. pp. 3147-3149, 3154-3160, 3164, 3150-3152, 3143-3147, 3159-3160, 3161, 3163], the jury unanimously found that Adkins' patent was valid and that it was infringed by Lear. The verdict for Adkins in the amount of $904,474.49 exactly equaled the agreed royalty of 1¼% together with accrued interest to May 31, 1963 [R. T. p. 886, line 7]. The issue of validity was presented to the jury after the trial court had ruled during the trial [R. T. p. 865, lines 8-24; p. 867, lines 10-15] (not prior to trial, as Lear states) that Lear had terminated the license agreement on April 8, 1959 under paragraph 2(a) but would continue to be liable for the contractual royalty if it continued to manufacture gyros covered by Adkins' patent [R. T. p. 865, lines 12-24]. The trial court then freed Lear from the rule of estoppel to question validity for the steel gyros only [R. T. p. 2067, line 26, to p. 2068, line 3; p. 2517, line 16]. With respect to the 2156 gyros, the trial court enforced the rule of estoppel and directed a verdict for Adkins [R. T. p. 2705, line 25, to p. 2706, line 2].

After the verdict in Adkins' favor, the trial court granted judgment n.o.v. for Lear for the steel gyros only on the sole ground that Adkins' patent was invalid for lack of novelty (A-94-102). Although the trial court undertook to decide the issue of infringe-

ment, it stated only that an invalid patent cannot be infringed (A-101-102). Both parties appealed to the District Court of Appeal.

The District Court of Appeal[6] did not consider paragraph 2(a) of the license agreement. Instead, that Court held that Lear had effected a termination on April 8, 1959 under paragraph 6, based on the erroneous conclusion that the third rejection of claims by the Patent Office constituted final Patent Office action (A-69), even though not so designated (see Rule 1.113 of the Rules of Practice of the Patent Office (N-1)) and even though a patent thereafter issued to Adkins on his application covering the same invention [Ex. 10]. The District Court of Appeal then went on to hold that prior to termination of the license agreement, Lear was liable for royalties under the license agreement and estopped to question both validity and infringement (A-76-81), and remanded the case to the trial court for the sole purpose of determining the amount of damages which had accrued prior to April 8, 1959 (A-90-91). For the period after that date, the Court concluded that the State court had no further jurisdiction (A-74, 86-88). Although both parties petitioned for a rehearing in the District Court of Appeal, which resulted in a modification of opinion recognizing that

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[6]After a hearing has been granted in the California Supreme Court, the opinion of the District Court of Appeal becomes a nullity and of no force or effect just as if the opinion had never been written, *Ponce v. Marr* (1956), 47 Cal. 2d 159, 161.

when Lear purported to terminate the license agreement it was non-exclusive (A-92), only Adkins petitioned for a hearing in the California Supreme Court, which was granted.

The California Supreme Court construed the license agreement in accord with the position taken by Adkins in his Pretrial Statement, in his Trial Brief, in his briefs in the District Court of Appeal and in his Petition for Hearing. In so doing, the California Supreme Court correctly held that the purpose of the paragraph 2(a) termination clause was to permit Lear to avoid the annual minimum royalty payments required by paragraph 3(g) in the event Lear ceased manufacturing and selling covered gyros (A-23-27). Based on the stipulation that Lear continuously and without interruption manufactured those gyros, that Court held that Lear had not effected a paragraph 2(a) termination of the license agreement (A-28). With respect to the paragraph 6 termination clause, that Court correctly held that Lear could not unilaterally and incorrectly anticipate final Patent Office action, and construed that paragraph to permit Lear to terminate only in the event that the Patent Office, in final Patent Office action, refused to issue a patent containing claims covering the gyros in issue (A-20). Thus, the California Supreme Court concluded that Lear had not effected a paragraph 2(a) or a paragraph 6 termination on April 8, 1959. That Court then held that if the gyros in issue in-

fringed the claims of Adkins' patent under the Federal test for infringement (A-29), Lear continued to be in breach of contract by reason of its refusal to pay royalties. The Court then held that under the settled doctrine, Lear was estopped to question the validity of Adkins' patent (A-28), and directed its attention to the issued claims. On this issue, the Court held (a) that Adkins had not added new matter to his application (A-5, 6, 33-38); (b) that the doctrine of file wrapper estoppel was inapplicable (A-29, 33); (c) that under the uncontradicted evidence Lear was not building the five gyros in issue according to the prior art patents, considered singly or collectively, together with ordinary mechanical skill (A-29, 36-38); and (d) that the issued claims covered all five gyros by their literal language (A-33), as well as under the doctrine of equivalents (A-35-36). Thus, the Court reversed the judgment n.o.v. (and also the new trial) and reinstated the jury verdict and the judgment thereon (A-51).

ARGUMENT.

Lear Has Failed to Raise Any Substantial or Important Question of Federal Law.

1. The Doctrine That During the Existence of a License Agreement a Licensee Is Estopped to Question the Validity of His Licensor's Patent Does Not Conflict With the Patent Laws.

The doctrine of licensee estoppel was approved and applied by the United States Supreme Court in *Automatic Radio Mfg. Co. v. Hazeltine Research* (1950), 339 U.S. 827; *Westinghouse Co. v. Formica Co.* (1924), 266 U.S. 342; *United States v. Harvey Steel Co.* (1905), 196 U.S. 310; *Dale Tile Manufacturing Co. v. Hyatt* (1888), 125 U.S. 46, and *Kinsman v. Parkhurst* (1855), 18 HOW 289, 59 U.S. 289.

In the case of *Automatic Radio Mfg. Co. v. Hazeltine Research* (1950), 339 U.S. 827, this Court, after first finding no misuse of the patent, again held that a licensee is estopped to question the validity of his licensor's patent and said, at page 836: "The general rule is that the licensee under a patent license agreement may not challenge the validity of the licensed patent in a suit for royalties due under the contract."

Thus, contrary to Lear's assertion, this Court has consistently approved the doctrine of licensee estoppel and recognized that it does not conflict with the patent laws.

2. The California Supreme Court's Construction of the Paragraph 2(a) Termination Clause of the License Agreement Does Not, as a Matter of Law, Render That Clause an Illegal Restraint of Trade Under the Sherman Act.

In its opinion, the California Supreme Court held that the purpose of the right of termination set forth in paragraph 2(a) of the license agreement was to save Lear the minimum annual royalty payments stipulated in paragraph 3(g) of the license agreement in the event Lear no longer desired to manufacture and sell any of the gyros covered by that agreement, and that consequently, Lear could not terminate the license pursuant to paragraph 2(a) while continuously manufacturing and selling gyros covered by that license. As the Court correctly pointed out, Lear stipulated that both before and after its purported termination of the license agreement under paragraph 2(a), it manufactured and sold, without interruption, the gyros which were covered by the license agreement. The interpretation of a patent license agreement is obviously a pure question of State and not Federal law, *Dale Tile Manufacturing Co. v. Hyatt* (1888), 125 U.S. 46. Once construed by the State court, the only possible Federal issue is whether the agreement restrains trade in violation of the Sherman Act (15 USC §1 *et seq.*).

Despite complete knowledge that Adkins urged from the outset the precise construction adopted by the California Supreme Court, Lear, for the first time, in its Petition for Rehearing in the California Supreme Court (which was denied without a hearing) (A-52) and now again in its Petition for Writ of Certiorari, argues that the California Supreme

Court holds that it must cease manufacture to terminate the license agreement and that this is an unreasonable restraint of trade under the Sherman Act unless the patent is valid.

Before considering Lear's argument and the cases it cites, it seems clear that the obvious answer is that the Court's construction of the paragraph 2(a) termination clause does not in any way *restrain* or *prohibit* Lear from either manufacturing or selling gyros containing Adkins' invention, but only requires Lear to pay the agreed royalty if it does so. This is not only the basic purpose of all license agreements, but also a legitimate and lawful purpose of every license agreement which clearly does not constitute a violation of the Sherman Act.

Lear places principal reliance on *Sola Electric Co. v. Jefferson Electric Co.* (1942), 317 U.S. 173; *Katzinger Co. v. Chicago Metallic Mfg. Co.* (1947), 329 U.S. 394; *MacGregor v. Westinghouse Electric & Mfg. Co.* (1947), 329 U.S. 402, and *United States v. United States Gypsum Co.* (1947), 333 U.S. 364, for its assertion that the Court's construction of paragraph 2(a) results in an unlawful restraint of trade under the Sherman Act. All four cases, however, are price fixing cases where the patent license agreement contained a price fixing clause whereby the licensor fixed the licensee's sales price, and are therefore not even remotely in point. There is no price fixing clause in the Adkins-Lear license agreement, and there is not even a scintilla of evidence in the voluminous record, and Lear points to none, which even suggests that Adkins used his patent either to fix prices or, for that matter, in any other manner

which violates the Sherman Act. In short, Adkins never used his patent right to extract any additional benefit from Lear. Rather, Lear used the license agreement to avoid its broader obligation under the agreement of December 29, 1951.

As this Court held in *Automatic Radio Mfg. Co. Co. v. Hazeltine Research* (1950), 339 U.S. 827, at 836, where there is no "price fixing" or other "misuse of patents," the doctrine of "[t]he *Katzinger* and *MacGregor* cases [is] inapplicable," and a licensee is indeed estopped to question the validity of his licensor's patent. This case provides a complete answer to Lear's argument, in that it holds that in order to avoid the doctrine of licensee estoppel, Lear must *first* show that the license agreement constitutes an unlawful restraint of trade or a misuse of the patent—a preliminary issue which Lear has wholly failed to show even exists in the case at bar. If a licensee were able to question the validity of his licensor's patent without *first* showing an unlawful restraint of trade or a misuse of the patent, every licensee could question the validity of his licensor's patent—which is not the law (Point 1, *supra*).

Lear's reliance upon the dissent of Mr. Justice Douglas and Mr. Justice Black in the *Automatic Radio* case, *supra,* is entirely misplaced. In that dissent it was not urged, as Lear asserts, that the licensee estoppel doctrine be totally abolished. Rather, as the dissenting opinion makes clear, Mr. Justices Black and Douglas were of the opinion that block licensing of 570 patents and 200 applications, under the facts there presented, constituted an illegal extension of the patent monopoly by exacting royalties

on the entire finished product, irrespective of whether it was covered by the patents and patent applications, and that the doctrine of the *Sola, Katzinger* and *MacGregor* cases should be applied to break up a "great pooling of patents," all of which are foisted upon a licensee who may wish to license only one patent. Lear's quotation from the dissenting opinion, at pages 24-25 of its petition, is wrenched out of context to make it appear that the dissent urged the total abolition of the doctrine of licensee estoppel.

Lear's reliance on Mr. Justice White's concurring opinion in *United States v. Singer Mfg. Co.* (1963), 374 U.S. 174, is equally misplaced. In that case Mr. Justice White went no further than to point out that the use of patents as part of a conspiracy to restrain trade and monopolize an industry (also condemned by the majority opinion) included an agreement among several manufacturers not to contest the validity of each other's patents, and that such a provision was therefore invalid upon analogy to the holding of the *Sola, Katzinger* and *MacGregor* cases, among others. At page 25 of its petition Lear again quotes out of context from a footnote in this concurring opinion in order to make it appear that Mr. Justice White was urging the complete abolition of the estoppel doctrine.

The remaining cases relied upon by Lear are similarly not in point, and, significantly, were all decided prior to the *Automatic Radio* case, *supra. Mercoid Corp. v. Mid-Continent Investment Co.* (1944), 320 U.S. 661, held only that assuming the patent is valid, it still cannot be used in a license agreement to protect unpatented material. The issue of licensee

estoppel was not even considered. *Pope Mfg. Co. v. Gormully* (1892), 144 U.S. 224, involved an agreement wherein the licensor licensed certain patents, fixed the licensee's sales price, prohibited the licensee from using other patents owned by the licensor, and forbade the licensee from contesting the validity of any of the licensor's patents. Although the Court considered whether the provision not to contest validity violated public policy, it did not decide that issue, and affirmed the judgment denying the licensor specific performance on the sole ground that the contract was unconscionable and oppressive. In *United States v. Masonite Corp.* (1942), 316 U.S. 265, the Court held that assuming, *arguendo*, Masonite's patents were valid, the "agency" agreement entered into between Masonite and others, each knowing the terms of the other's agreement, and whereunder Masonite fixed the "agent's" sales price, constituted a conspiracy to fix prices in violation of the Sherman Act. Again, the doctrine of licensee estoppel was not even considered. In *Nachman Spring-Filled Corporation v. Kay Mfg. Co.* (1943, Cir. 2), 139 F. 2d 781, the plaintiff, in a prior suit, recovered judgment for infringement of two patents. In an agreement settling that litigation, the defendant agreed not to manufacture or sell any devices which would infringe a third patent owned by the plaintiff, and further agreed to discontinue its manufacture thereunder for the 13-year unexpired term of that third patent. Construed most favorably to Lear, the Second Circuit held (after noting that a licensor-licensee situation might be different) that *if* the agreement was an illegal restraint of trade under the Sherman Act (which the Court did not decide), then only the va-

lidity of the patent could save the agreement, and therefore the defendant could question the validity of the patent. Obviously, there is a material distinction between an agreement not to manufacture or sell devices covered by a patent and a license agreement to pay a royalty if the defendant does manufacture and sell devices covered by the patent. The former is a restraint, the latter is not.

In the case at bar, Lear is free to manufacture or not manufacture gyros containing Adkins' invention as it sees fit. All the California Supreme Court holds is that Lear must pay royalties under the license agreement if it manufactures gyros containing Adkins' invention. As this Court said in the case of *Automatic Radio Mfg. Co. v. Hazeltine Research* (1950), 339 U.S. 827, "Petitioner may not complain because it must pay royalties whether it uses Hazeltine's invention or not." *A fortiori,* Lear cannot complain because it must pay Adkins royalties where Lear uses Adkins' invention.

3. As a Matter of State Law, Lear May Not Repudiate and Stand Out From Under the License Agreement and Then Assert a Total Failure of Consideration Because the Patent Is Allegedly Invalid.

Lear cites several cases (*Bucky v. Sebo* (1953, Cir. 2), 208 F. 2d 304; *Holmes, Booth & Haydens v. McGill* (1901, Cir. 2), 108 Fed. 238; *Mudgett v. Thomas* (1893, C. C., Ohio), 55 Fed. 645; *Brown v. Lapham* (1886, C.C., N.Y.), 27 Fed. 77, and *Crew v. Flanagan* (1954), 65 N.W. 2d 878) for the proposition that an *exclusive* licensee may repudiate and stand out from under the license agreement and is then freed from the estoppel doctrine in order to

show that there is a total failure of consideration because the patent is invalid. As Lear states, there are cases to the contrary (*St. Paul Plow Works v. Starling* (1891), 140 U.S. 184; *Eastern States Petroleum Co. v. Universal Oil Co.* (1938), 22 Del. Ch., 2 A. 2d 138) which apply the opposite and better rule.

In *Bowers Mfg. Co. v. All-Steel Equipment, Inc.* (1960, Cir. 9), 275 F. 2d 809, the Ninth Circuit held, as matter of State contract law, that the licensee's procedural maneuver of purporting to repudiate the agreement in an attempt to thereby avoid the doctrine of estoppel to question the validity of his licensor's patent was unavailing and logically should not avoid the doctrine of estoppel. The court said, at page 812: "It is difficult to see why a procedural technicality such as this should create substantive rights in the licensee." If a licensee, by the mere device of "repudiating" the agreement, could free himself from the doctrine of estoppel to question the validity of the patent, the result would be the total abolition of the doctrine which has been approved and applied consistently by this Court.

In this Court, the complete answer to the question of whether or not a licensee may repudiate and stand out from under the agreement and then urge failure of consideration on the ground of the alleged invalidity of the patent is that the question is purely one of State law relating to the construction of and the consideration for contracts and not Federal law, *Dale Tile Manufacturing Co. v. Hyatt* (1888), 125 U.S. 46; *American Railway Express Co. v. Kentucky* (1927), 273 U.S. 269; *Automatic Radio Mfg. Co. v. Hazeltine*

Research (1949, Cir. 1), 176 F. 2d 799; *Scott v. Platt* (1943), 171 Ore. 379, 137 P. 2d 975. Thus, in the three Federal cases cited by Lear, either State law or Federal cases which may be traced to State cases applying State law were relied upon. In none of these cases did the Court purport to apply Federal law. This Court will not review a conflict between the different States on a question of purely State law relating to consideration for contracts, *Ruhlin v. New York Life Ins. Co.* (1938), 304 U.S. 202, 206.

In the case at bar, the California Supreme Court held that Lear had not repudiated the license agreement and could not do so (citing *Thompson Spot Welder Co. v. Oldberg Mfg. Co.* (1932), 256 Mich. 447, 240 N.W. 93), because the license agreement expressly covers, in paragraph 6, Lear's right to terminate in the event the patent is held invalid. As this Court held in *United States v. Harvey Steel Co.* (1906), 196 U.S. 310, a licensee who is a member of an industry where licensing of patents is commonplace is presumed to contract with reference to the rule prohibiting a licensee from questioning the validity of his licensor's patent, and construed a similar provision to refer only to third party adjudication and not as an authorization to the licensee to attack his licensor's patent. Since the doctrine of licensee estoppel has been approved and applied by this Court, the California Supreme Court's decision on this issue does not conflict with any Federal statute.

Moreover, the "repudiation" theory urged by Lear was considered and rejected by this Court in *St. Paul Plow Works v. Starling* (1896), 140 U.S.

185. In that case the Court held that an exclusive licensee cannot "repudiate" the license and avoid the estoppel doctrine while continuing to manufacture devices covered by the patent, and that if the licensee purported to do so, the licensor could, at his election, sue on the contract for royalties or terminate the contract and sue for infringement and statutory damages. Thus, if the issue were one of Federal law, it has been decided adversely to Lear.

Invalidity of a patent is not, *ipso facto,* a defense to a suit for royalties under a license agreement. Under all of the cases, invalidity would be a defense only if it results in a complete failure of consideration, in which event failure of consideration and not invalidity is the defense. In the case at bar, under the last unnumbered paragraph of paragraph 11 of the license agreement, Lear's license of Adkins' invention became, *at Lear's election,* non-exclusive on August 15, 1958, before Lear purported to terminate the license and license agreement on April 8, 1959. In *Bowers Mfg. Co. v. All-Steel Equipment, Inc.* (1960, Cir. 9), 275 F. 2d 809, the court distinguished between an exclusive and a non-exclusive license and concluded that where the license is non-exclusive, the licensee bargains for freedom from suit and not for the monopoly of the patent, from which he can be evicted, and that consequently, invalidity cannot constitute a failure of consideration. Accord, *Automatic Radio Mfg. Co. v. Hazeltine Research* (1949, Cir. 1), 176 F. 2d 799. Thus, Lear, as a non-exclusive licensee, is estopped to question the validity of Adkins' patent, since invalidity cannot result in a total failure of consideration.

Even if patent invalidity in a non-exclusive license situation did result in a total failure of consideration, this defense would still be unavailing to Lear in this action because the license agreement recites as other non-severable consideration (1) the license under the patent application, (2) the cancellation and superseding of the first agreement of December 29, 1951, and (3) the concurrent employment of Adkins under Lear's "standard" employment agreements. In this regard, it has long been the rule that a partial failure of non-severable consideration does not excuse the defendant's performance, *United States v. Harvey Steel Co.* (1906), 196 U.S. 310; *Patterson Ballagh Corp. v. Byron Jackson Co.* (1944, Cir. 9), 145 F. 2d 786; *Del Riccio v. Photochart* (1954), 124 Cal. App. 2d 301.

Finally, Lear did not purport to repudiate and stand out from under the license agreement, but, to the contrary, purported to terminate the license agreement pursuant to paragraphs 2(a) and 6—which the California Supreme Court, as a matter of contractual construction, held it had no right to do.

4. The Doctrine of Licensee Estoppel Is No Different Where the License Is Initially Under a Patent Application and Then Automatically Shifts to a License Under the Claims of the Issued Patent, Especially Where the Issued Claims Cover the Invention of the Application and the Invention of the License Agreement.

In the case at bar, Lear took a license of the original claims of the application, if patentable (even though Lear knew that all of those claims had been rejected by the Patent Office and that amended claims were pending), which, by the agreement,

shifted to a license under the claims of the issued patent upon issuance if the claims were "substantial claims." It was "agreed" that the invention was disclosed in the application, covered by its claims and embodied in the 2152, 2153 and 2156 gyros. In construing the license agreement, the California Supreme Court held that Lear agreed to pay Adkins the stipulated royalty until final Patent Office action, and that if a patent issued with claims covering the invention embodied in those gyros, Lear agreed to continue to pay the stipulated royalty. As the California Supreme Court further held, "the patented apparatus falls within the scope of the initial application, and because Lear has adapted it to its steel gyros, we must conclude that the patented apparatus was within the contemplation of the parties." Thus, Lear received precisely what it bargained for and agreed to pay for. As a result, Lear's argument that the rule should be different because the licensor can expand his claims to cover something different than the invention the licensee intended to license is not in point, as Adkins did not expand his claims to cover a different invention but obtained claims which covered the invention of the application, the invention of the license agreement and the invention Lear continuously used in all five gyros in issue.

Baldwin Rubber Co. v. Payne & Williams Co. (1939, Cir. 6), 107 F. 2d 350, and *Stubnitz-Greene Spring Corp. v. Fort Pitt Bedding Co.* (1940, Cir.

6), 110 F. 2d 192, both cited by Lear, afford the complete answer, in that the rule of licensee estoppel is not and should not be any different depending on whether the license originates under the application or under the patent, since the licensee can show (1) that the claims do not cover the invention of the contract and/or (2) that he is building his device solely according to the teachings of the prior art. Consequently, although this Court did not find it necessary to decide this issue, in *Westinghouse Co. v. Formica Co.* (1942), 266 U.S. 342, the issue was thereafter properly decided by the Federal courts.

When Lear argues throughout its petition that it should be permitted to contest the "patentability of the claims" of the application, it is really only advancing its argument that under its construction of paragraph 6 of the license agreement, it could unilaterally and incorrectly anticipate final Patent Office action, determine that no claims could issue, and terminate the license agreement. On this issue the California Supreme Court, in construing the license agreement, held that Lear could not do so, and further held that if a patent issued with claims covering the invention of the application and the invention of the agreement, Lear continued to be liable for royalties on gyros it thereafter manufactured which incorporated Adkin's invention. That Court's decision on this State issue is obviously correct.

5. The License Agreement Does Not Violate Either the Patent Laws or the Sherman Act by Requiring Lear to Pay Royalties During the Pendency of the Patent Application.

Lear now argues for the first time, in the within petition, that the license agreement antedates the patent monopoly to include the original claims of the application because Lear is required to pay royalties under the license of the claims of the application. Lear constructs this argument on the rule that a patent applicant has no property right under an application (citing *Marsh v. Nichols, Shepard & Co.* (1888), 128 U.S. 605), and asserts that where a licensee must pay royalties under a license of the claims of the application, this is analogous to the case of *Brulotte v. Thys Co.* (1964), 379 U.S. 29. However, in that case this Court held only that a licensor cannot extend the monopoly of the patent by exacting royalties *after* the patent has expired. Lear's argument is patently erroneous, as an agreement founded upon the disclosure of an invention is solely a matter of contract governed by State and not Federal law which neither grants a property right in the claims of the application nor antedates the patent monopoly for the period prior to the issuance of a patent, *Hamilton v. Park McKay Co.* (1897), 112 Mich. 138, 70 N.W. 436. No Federal statute is violated where a manufacturer agrees to pay a royalty for the disclosure of an idea, discovery or invention, and it follows that a manufacturer may so agree for an invention which is described in a pending patent application. *Hamilton v. Park McKay Co., supra, Automatic Radio Mfg. Co. v. Hazeltine Research* (1950), 339 U.S. 827.

6. The California Supreme Court Held That the Issued Claims Were Within the Scope of the Original Specifications. Thus, the Addition of Any New Language Is Irrelevant. In Addition, the Patent Office Was Fully Apprised of the Amendment.

Without even mentioning what it claims to be new matter, or why it deems it to be new matter, Lear accuses the California Supreme Court of failing to consider whether or not Adkins inserted new matter in his application and whether this constitutes fraud on the Patent Office. In this regard, that Court was careful to point out that the applicant "may not enlarge the disclosure of the application as initially filed by adding new matter" (A-5-6), and that the issuance of a patent "means that the Patent Office did not consider the amendment to constitute new matter in violation of the patent laws, and its determination in this regard is entitled to special weight" (A-6). The Court then went on to hold that Adkins did not in fact add new matter, as "the patented apparatus falls within the scope of the initial application. . ." (A-34). Based on the record, the Court's conclusion is manifestly correct. Thus, the Court's statement in footnote 35 (A-46) that it is unnecessary to consider this issue, upon which Lear relies, is only an alternative holding after the Court in fact decided the issue in Adkins' favor.

The precise issue was whether or not new language broadened the invention or merely described in different words what was initially disclosed and described by other terminology. Thus, the insertion of alleged new matter in these circumstances cannot possibly constitute fraud on the Patent Office. Whatever language

is added to the specifications is not only disclosed but also presented to the Patent Office for consideration as to whether it constitutes new matter, and is a decision which rests entirely on the contents of the file wrapper.

Walker Process Equipment, Inc. v. Food Machinery & Chemical Corp. (1965), 382 U.S. 172, cited by Lear, is simply not in point, since in that case the court accepted as true the allegation that the patent had been obtained by an *intentional* fraudulent representation that the invention had not been in public use longer than the period permitted by the statute, and based thereon, held, in part, that since fraudulent procurement of this type may bar a suit for infringement, it may also be an element of a Sherman Act violation. *Precision Instrument Manufacturing Company v. Automotive Maintenance Machinery Company* (1945) 324 U.S. 806, also cited by Lear, is equally not in point, since in that case the fraud which was held to bar the suit was the patentee's *actual* knowledge that the alleged inventor was not the true inventor and that the alleged inventor had falsified his priority date.

The case at bar is not even remotely similar to either the *Walker* or the *Precision* case for the simple reason that, as a matter of law, no new matter was inserted in the specifications.

7. The California Supreme Court Properly Applied the Federal Doctrine of File Wrapper Estoppel.

In its opinion, the California Supreme Court stated that "claims which have been allowed cannot, under the doctrine of file wrapper estoppel, be held to cover what has previously been eliminated from the patent application in order to avoid a rejection"

(A-29), and went on to hold that "the record does not support" (A-33) Lear's contention that a file wrapper estoppel exists in the case at bar because "the accused apparatus falls within the literal language of the claim" (A-33), *Graver Tank & Mfg. Co. v. Linde Air Products Co.* (1950), 339 U.S. 605.

Lear's citation of *Schriber-Schroth Co. v. Cleveland Trust Co.* (1950), 311 U.S. 211, is not in point. In that case the patentee, to avoid a rejection, eliminated the "flexible web" as an element of his invention and obtained claims which did not have the "flexible web" as an element. The Court held only that under the doctrine of file wrapper estoppel the allowed claims cannot be construed to read in the cancelled "flexible web." The case of *McClain v. Ortmayer* (1891), 141 U.S. 419, holds only that the claims may be limited by the specifications but not expanded by the specifications, and is therefore also not in point.

Lear also argues that the California Supreme Court relied upon the cancelled method claims in construing the scope of the apparatus claims. However, the Court in its opinion was very careful in explaining that the mandrel "is used by Adkins only as an assembly tool" (A-9), and that the mandrel is not one of the elements called for by the claims of Adkins' patent (A-31, 33, 34). Thus, the Court's conclusion that "the accused *apparatus* falls within literal language of the claim, thus determining the issue of coverage" (A-33), equally disposes of this question.

In short, the California Supreme Court fully understood and properly applied the doctrine of file wrapper estoppel in the case at bar.

Conclusion.

For all of the foregoing reasons, it is respectfully submitted that Lear's Petition for Writ of Certiorari should be denied.

Respectfully submitted,

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May 3, 1968

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IN THE

Supreme Court of the United States

October Term, 1967
No. 1303

LEAR, INCORPORATED, *Petitioner,*

vs.

JOHN S. ADKINS, *Respondent.*

VOLUME II.

APPENDIX TO BRIEF FOR RESPONDENT IN OPPOSITION.

APPENDIX E.

Page 109 of Lear's Brief in the District Court of Appeal Entitled "Respondent's and Cross-Appellant's Opening Brief."

It is a recognized principle of law that when a license agreement provides a grant of a right to either manufacture, use, or sell a product incorporating a patented invention, the licensee is estopped to contest the validity of the licensed patent only as long as the licensee is operating under the license.

The Armstrong Company v. Shell Company of California (1929), 98 Cal. App. 769;

Automatic Radio Manufacturing Company v. Hazeltine Research, Inc. (1949), 339 U.S. 827, 70 S. Ct. 894, 94 L. Ed. 1312;

Del Riccio v. Photochart (1954), 124 Cal. App. 2d 301.

This is not only "the modern rule" as plaintiff likes to call it (Pltf. Op. Br. p. 78), but it is also the "old" rule as well. *Patent Assignments and Licenses* by Ridsdale Ellis (1936), §376, page 428. This rule was set out in the 1939 case of *The Armstrong Co. v. Shell Company of California, supra*, at 778 as follows:

> "It is a well-recognized rule of law that a licensee under a patent right cannot dispute the validity of his licensor's patent."

This estoppel lasts only so long as the licensee operates under the license agreement. This estoppel arises not because of express terms in the agreement but because the licensee is using and enjoying the benefit and protection of the rights covered by the agreement and should not be permitted to reap the benefits of the agreement and at the same time contest the validity of the patents to show failure of consideration for the agreement.

APPENDIX F.

Pages 21-25 of Adkins' Trial Brief Dated February 24, 1964 [C. T. pp. 2319-2322].

7. Lear cannot exercise 2(a) termination without prior or concurrent cessation of manufacture.

In Paragraph 2(a) Lear is given the right "on ninety days prior written notice to Adkins to terminate any one or more of the licenses herein granted". This paragraph, however, is silent on Lear's duty to pay royalties on products manufactured after notice of termination.

Paragraphs 2(a), 3(g), 6, 8 and 10 all pertain to various rights of termination and consequently must be read together in deciding whether Lear may validly exercise 2(a) termination while continuing to manufacture the very same gyros, *O'Connor v. West Sacramento Co.* (1932) 189 Cal. 7, 11. When the five paragraphs dealing with termination are considered together the conclusion is inescapable that *both* parties meant in Paragraph 2(a) that Lear may terminate under this paragraph only if prior thereto or concurrently therewith Lear ceases manufacture of all gyros [p. 21] incorporating said invention in which event Lear has 90 days to complete manufacture of gyros in progress. The obvious purpose of Paragraph 2(a) was to terminate minimum royalty payments if Lear decided to cease manufacture of covered gyros in that even though Lear had no obligation to manufacture it would have to pay yearly minimum royalties even if it did not manufacture as long as the particular license was in effect. [Paragraph 3(g)]

(a) It is absurd to assume that Adkins was exchanging a right to a "mutually satisfactory royalty"

for $500 upon execution of the said agreement [Page 2] which would be the only certain consideration if in conjunction with the right not to manufacture at all [Paragraph 3(g)] Lear also has the right to terminate and continue manufacture royalty free under Paragraph 2(a). Not only does the presumption against "absurd" results prevent such an interpretation but the canon requiring all provisions dealing with the same subject to be construed together requires the result sought by Adkins.

(b) The *only* provisions enabling Lear to manufacture without "further royalt[y] payments" is expressly covered in Paragraph 6 in the event of adjudication of invalidity or non-issuance of "substantial claims"—both of which are acts which third parties only can occasion. There is not one indication in said agreement that Lear can by its own act terminate royalties under Paragraph 2(a) while continuing manufacture. As stated supra such a construction would violate the implied provision in every agreement of good faith and fair dealing *Automatic Vending Co. v. Wisdom* (1960) 182 Cal. App. 2d 354. In other words Lear's only rights to manufacture royalty free are covered in Paragraph 6 and such rights are not to be read into Paragraph 2(a). Paragraph 6 would be wholly redundant if Lear for any reason could terminate under Paragraph 2(a) and escape payment of royalties. [p. 22]

(c) Under Paragraph 3(g) Adkins can terminate Lear's right to manufacture if Lear is in breach by failing to make minimum royalty payments and Lear thereafter has 90 days to complete manufacture of gyros then in progress and is expressly prohibited from further manufacture. It would be absurd to say that

where Adkins can prevent further manufacture if Lear fails to pay minimum royalties, Lear can escape its obligation to pay minimum *and* earned royalties by terminating under 2(a) and thereby not only be relieved of a breach by failure to pay minimum royalties but also acquire the new right to manufacture free of any royalty at all. The 90 day grace period of 3(g) is solely for Lear's benefit and it must be assumed that the 90 day period of 2(a) is also solely for Lear's benefit since it can be of no benefit to Adkins in the absence of a duty to manufacture. Therefore an obligation to cease manufacture arises by necessary implication to give effect to the 90 day grace period and prevent it from being meaningless.

(d) Under Paragraph 10, Adkins can terminate if Lear fails to pay earned royalties and does not cure its default within the notice period. Like Paragraph 2(a) this paragraph is silent on Lear's right to manufacture after termination and it would also be absurd to say that Adkins can bar Lear from further manufacture only if it refuses to pay minimum royalties but not if Lear refuses to pay earned royalties. Consequently the duty to cease manufacture must be implied in both Paragraphs 2(a) and 10.

(e) Paragraph 11 gives Lear four options upon Adkins leaving Lear's employ, three of which require payment of minimum royalties and one earned royalty only. If Lear could terminate under 2(a) and pay no royalties at all this would constitute a fifth option which would result in an absurdity as obviously Lear would always exercise a 2(a) termination. In other words Lear's construction of 2(a) makes Paragraph 11 wholly [p. 23] useless.

(f) It is also arguable that once Adkins leaves Lear's employ 2(a) is superseded by Paragraph 11 which provides that "in such event this license agreement shall continue in full force and effect". This construction is strengthened where the fourth option of no minimum but only earned royalties is elected since the same result pertains under the proper construction of Paragraph 2(a) prior to Adkins leaving Lear's employ.

In addition to a construction of all five termination clauses in said agreement prohibiting an exercise of 2-(a) without prior or concurrent cessation of manufacture the same result must be achieved under CC §1655 and §1656 whereunder provisions which are necessary to make an agreement reasonable and capable of being carried into effect are implied as a matter of law, as any interpretation which would allow Lear to terminate and continue to manufacture the same gyros royalty free would be the most unreasonable construction of this clause that is conceivable. Clearly Adkins was not giving and Lear could not reasonably understand it was acquiring the right to unilaterally end all royalty payments at any time. [p. 24]

APPENDIX G.

1. Pages 31-35 of Adkins' "Answering Brief to the 'Opening Brief for Lear Concerning the Directed Verdict and the Denial of Lear's Motion for Judgment Notwithstanding the Verdict, All With Respect to the 2156 Gyroscope.'"

A. Lear Could Not Exercise Paragraph 2(a) Termination Without Prior or Concurrent Cessation of Manufacture of Covered Gyros, and Its Purported Termination on April 8, 1959 Was Only a Breach of Contract.

In paragraph 2(a) of the license agreement Lear is given the right "on ninety days prior written notice to Adkins to terminate any one or more of the licenses herein granted." This paragraph, however, is silent on the question of under what circumstances Lear may exercise that right, and is also silent on Lear's duty to pay royalties on products manufactured after notice of termination.

Paragraphs 2(a), 3(g), 6, 8 and 10 all pertain to various rights of termination, and, consequently, must be read together in deciding whether Lear may validly exercise 2(a) termination while continuing to manufacture and sell the very same gyros, *O'Connor v. West Sacramento Co.* (1922), 189 Cal. 7, 11. When these paragraphs are considered together, the conclusion is inescapable that Lear may only terminate under paragraph 2(a) if prior thereto or concurrently therewith Lear ceases manufacture of all covered gyros, in which event Lear has ninety days in which to complete manufacture and sale of gyros in progress.

The obvious purpose of paragraph 2(a) was to permit Lear to terminate annual minimum royalty payments if Lear ceased manufacture of covered gyros, as under [p.

31] paragraph 3(g) Lear would have to pay substantial yearly minimum royalties for 17 years even if it did not manufacture as long as the license was in effect.

It is absurd to assume that Adkins was exchanging his right to a "mutually satisfactory royalty" under the first agreement of December 29, 1951 for $500.00 upon execution of the license agreement (p. 2), which would be the only certain consideration if, in conjunction with the right not to manufacture at all (paragraph 3(g)), Lear also had the right to terminate and continue manufacture royalty-free under paragraph 2(a). There is not one indication in the license agreement that Lear could, by its own unilateral act, terminate its obligation to pay royalties under paragraph 2(a) while continuing to manufacture and sell covered gyros.

The *only* provision enabling Lear to terminate and manufacture without "further royalt[y] [payments]" is expressly covered in paragraph 6 in the event of adjudication of invalidity or non-issuance of "substantial claims".

Since Lear's only rights to terminate and thereafter manufacture royalty-free are expressly covered in paragraph 6, such rights are not to be read into paragraph 2(a). Paragraph 6 would be wholly redundant if Lear could for any reason and at any time terminate the license agreement under paragraph 2(a) and escape further payment of royalties.

Under paragraph 3(g) Adkins could terminate Lear's right to manufacture covered gyros if Lear was in breach by failing to make minimum royalty payments, and Lear thereafter had ninety days in which to complete manufacture and sale of gyros then in progress and is thereafter expressly prohibited from further

manufacture. [p. 32] It would be equally absurd to say that where Adkins can prevent further manufacture if Lear fails to pay minimum royalties, Lear can escape its obligation to pay both minimum *and* earned royalties by terminating under paragraph 2(a) and thereby also acquire the new right to manufacture free of any royalty at all. The 90-day grace period of paragraph 3(g) is solely for Lear's benefit. It must also be assumed that the 90-day grace period of paragraph 2(a) is also solely for Lear's benefit, since it can be of no benefit to Adkins in the absence of a duty to manufacture. Therefore, prior or concurrent cessation of manufacture arises in paragraph 2(a) by necessary implication to give effect to the 90-day grace period and prevent it from being meaningless.

Paragraph 11 gives Lear four options upon Adkins' leaving Lear's employ, three of which require payment of minimum royalties and one earned royalties only. If Lear could terminate under paragraph 2(a), continue to manufacture and pay no royalties at all, this would constitute a fifth option and would result in an absurdity, as obviously Lear would always exercise a paragraph 2(a) termination. In other words, Lear's construction of paragraph 2(a) makes paragraph 11 wholly useless.

In addition, implying a condition precedent of prior or concurrent cessation of manufacture into paragraph 2(a) is compelled by C.C. §1655 and §1656, whereunder provisions which are necessary to make an agreement reasonable and capable of being carried into effect are implied as a matter of law. Any interpretation which would allow Lear to terminate under paragraph 2(a) while continuing to manufacture the very same gyros royalty-free would be the most unreasonable construc-

tion of this paragraph that is conceivable. Clearly, Ad-
[p. 33] kins was not giving, and Lear could not reasonably understand that it was acquiring, the right to unilaterally end all royalty payments at any time and for any reason.

Pertinent canons of construction are contained in C.C. §1635, *et seq.* These rules of construction require that a contract be interpreted to give effect to the intention of the parties "as it existed at the time of contracting" (§1636); that the language employed, if clear and explicit, is controlling unless it results in an "absurdity" (§1638); that each clause is to be given meaning and used in interpreting every other clause (§1641), *Kohn v. Kohn* (1950), 95 Cal. App. 2d 708; that an interpretation which makes the agreement "reasonable" and "capable of being carried into effect" is required (§1643); and that any uncertainty is interpreted "most strongly" against the party who caused the uncertainty to exist (§1654), *Hunt v. United Bank and Trust Co.* (1930), 210 Cal. 108.

In applying these canons, "stipulations which are necessary to make a contract reasonable . . . are implied" (§1655) *as a matter of law,* and all provisions necessary to carry the agreement into effect are also implied (§1656) *as a matter of law, Brawley v. Crosby Research Foundation* (1946), 73 Cal. App. 2d 103.

Applying these canons of construction and implying stipulations which are necessary to make the contract reasonable does not make a new contract for the parties, as Lear asserts. Rather, it results in a construction of the contract in accordance with the parties' actual intent.

Lear argues, however, that because its obligation to cease manufacture if Adkins terminates is discussed in paragraph 3(g), the obligation to cease manufacture can- [p. 34] not be read as a condition precedent to its right to terminate under paragraph 2(a). The cases it cites for the proposition that where a particular obligation is discussed in one part of an agreement it is not read into another part are, however, distinguishable, since they hold only that additional obligations will not be imposed on the same party. Moreover, the rule is only an aid to construction and not an absolute to be applied when other canons of construction reach a more reasonable result.

Lastly, it should not be forgotten that Lear drafted the license agreement[55] and caused the uncertainty, if any, in paragraph 2(a) to exist. [p. 35]

2. Pages 29-38 of Adkins' "Reply Brief on Appeal From the Judgment for Defendant N. O. V. and From the Order Granting a New Trial in the Alternative."

A. Lear Could Not Exercise Paragraph 2(a) Termination Without Prior or Concurrent Cessation of Manufacture of Covered Gyros.

Paragraph 2(a) states, in the last sentence, that:

> "Lear shall have the right on ninety days prior written notice to terminate any one or more of the licenses herein granted."

Before considering the paragraph 2(a) termination clause, a restatement of Lear's sole argument is essential. Lear's only argument is that because Lear is prohibited by paragraph 3(g) from further manufacture

if Adkins terminated for Lear's failure to pay minimum royalties, the obligation to cease manufacture before termination by Lear should not be read into paragraph 2(a). For this argument Lear cites only the canon of construction that where a subject is covered in one part of an agreement, it is presumed that the parties intentionally omitted it from other parts. This argument ignores the fact that under paragraph 3(g) Lear must cease manufacture *after* termination by *Adkins*, whereas under Adkins' construction of paragraph 2(a) Lear must cease manufacture *before* termination by *Lear*. It also ignores the controlling and superior canon of construction that the actual intent of the parties is to be ascertained regardless of a single technical rule of construction, *Crillo v. Curtola* (1949), 91 Cal. App. 2d 263, 273, *California Building Co. v. Halle* (1947), 80 [p. 29] Cal. App. 2d 229, *Kohn v. Kohn* (1950), 95 Cal. App. 2d 708. The canons of construction are only aids, and one canon cannot be applied when it results in wholly disregarding the actual intent of the parties and other more pertinent canons of construction.

As Lear construes paragraph 2(a) and the three other agreements executed concurrently with the license agreement, Lear had the right at any time to terminate the license agreement under paragraph 2(a) and thereafter, under the release and assignment provisions of the three other agreements, the bearing alignment idea and invention became the property of Lear. It must be remembered that under paragraph 3(g), Lear had no duty to manufacture. Thus, Lear is in effect arguing that it could have terminated the license agreement under paragraph 2(a) one day after execution of that agreement, refrained from manufacture for ninety days, and thereafter the idea and invention and all pat-

ents thereon were automatically assigned to Lear and Lear was also released of all claims by Adkins.

Thus, Lear's construction of paragraph 2(a) would result in the license agreement being void and unenforceable for lack of mutuality of obligation, *Brawley v. Crosby, etc. Foundation, Inc.* (1946), 73 Cal. App. 2d 103. Although Lear states that Adkins asserted that the license agreement was void *ab initio*, Adkins never took that position. Rather, Adkins' position is that if Lear's construction is placed on paragraph 2(a), then the agreement would be void for lack of mutuality.

Civil Code §1643 states that "a contract must receive such an interpretation as will make it lawful, operative, definitive, reasonable and capable of being carried into effect, if it can be done without violating [p. 30] the intention of the parties." Thus, a construction which will make the agreement reasonable and carry out the actual intention of the parties at the time of contracting is preferred.

The obvious purpose of the paragraph 2(a) termination clause was to permit Lear to terminate annual minimum royalty payments required by paragraph 3(g) if Lear ceased manufacturing covered gyros. Under paragraph 3(g), Lear was obligated to pay Adkins minimum royalties of $1,500.00 a year for sixteen years, or $24,000.00, even if it did not manufacture, as long as the license was in effect. Paragraph 3(g) further states that minimum annual royalties are to be paid "provided the licenses . . . are in force and effect," but paragraph 3(g) does not state how Lear can terminate their force and effect if Lear ceases manufacturing covered gyros. Obviously, the "force and effect" phrase is a reference to paragraph 2(a), which is the

only right given to Lear to terminate the license (not the agreement) which is not expressly tied to the happening of a condition. Thus, paragraphs 2(a) and 3(g) must be read together to mean that if Lear ceases manufacturing covered gyros, it can then terminate annual minimum royalties required by paragraph 3(g) by exercising paragraph 2(a) termination. Furthermore, in the absence of any duty to manufacture, the 90-day period of paragraph 2(a) can only be for Lear's benefit, and must mean that like the 90-day period provided in paragraph 3(g) Lear has ninety days in which to complete and sell those gyros then in progress. Any other construction renders the 90-day period meaningless. Thus, the 90-day clause of paragraph 2(a) is still another indication that paragraph 2(a) termina-
[p. 31] tion by Lear requires prior or concurrent cessation of manufacture of covered gyros.

Civil Code §1638 states that "the language of a contract is to govern its interpretation, if the language is clear and explicit and does not involve an absurdity." It would be absurd to assume that Adkins was exchanging his right to a "mutually satisfactory royalty" under the first agreement of December 29, 1951 for $500.00 upon execution of the license agreement (p. 2), which would be the only certain consideration if, in conjunction with the right not to manufacture at all (paragraph 3(g), Lear also had the right to terminate under paragraph 2(a), and continue to manufacture and sell covered gyros royalty-free, and also receive the invention by assignment under the three other agreements, and receive freedom from all claims and suits under the release provisions of those agreements.

Paragraphs 2(a), 3(g), 6, 8 and 10 of the license agreement all pertain to various rights of termination, and consequently must be read together in deciding whether Lear may exercise 2(a) termination while continuing to manufacture and sell covered gyros, *O'Connor v. West Sacramento Co.* (1922), 189 Cal. 7, 11. Paragraph 2(a) is silent on Lear's obligation to pay royalties if it continued to manufacture after termination. The only provision enabling Lear to terminate and continue manufacture without further royalty payments is contained in paragraph 6 in the event of adjudication of invalidity or non-issuance of "substantial claims." Since this right is expressly covered therein, it is not to be read into paragraph 2(a). Paragraph 6 would be wholly redundant if Lear could terminate for any rea- [p. 32] son and at any time under paragraph 2(a) and thereby avoid further royalty payments. Thus, this argument entirely balances Lear's only argument on not reading a condition of prior or concurrent cessation of manufacture into paragraph 2(a) because the subject is mentioned in paragraph 3(g), as why should the right to manufacture royalty-free after termination be read into paragraph 2(a), which would be the result under Lear's construction, if the only right to manufacture royalty-free is fully covered in paragraph 6. In other words, Lear's argument on not reading prior or concurrent cessation of manufacture into paragraph 2(a) requires reading the right to manufacture royalty-free from paragraph 6 into paragraph 2(a).

Under paragraph 3(g) Adkins could terminate Lear's right to manufacture covered gyros if Lear was in breach by failing to make minimum royalty payments. Under paragraph 10, Adkins could terminate the

license agreement if Lear failed to pay earned royalties, but paragraph 10 is, however, silent on the subject of further manufacture after termination, and is also silent on Lear's obligation to pay royalties if it continues to manufacture covered gyros after termination. It would be equally absurd to say that Adkins could prevent further manufacture only if Lear failed to pay minimum royalties and not where Lear failed to pay earned royalties, and equally absurd to say that if Lear continued manufacture after paragraph 10 termination for failure to pay earned royalties it would not be liable for earned royalties.

Rather, it is obvious that the parties so clearly understood that Lear's right to manufacture covered gyros would end upon termination in both the paragraph 2 [p. 33] (a) and paragraph 10 situations that they did not find it necessary to state it in those paragraphs but stated it only in paragraph 3(g) for minimum royalties where there might be some doubt.

Under paragraph 11, Lear received four options upon Adkins' leaving Lear's employ, three of which required payment of increased minimum royalties and one of which required only payment of paragraph 3(g) minimum royalties and actual earned royalties. If Lear could terminate under paragraph 2(a) and pay no further royalties at all, this would constitute a fifth option and also make paragraph 11 wholly redundant. Obviously, a construction of one sentence which renders other paragraphs totally meaningless is to be avoided.

Civil Code Sections 1655 and 1656 require that stipulations which are necessary to make a contract reasonable be implied therein. Any interpretation which would permit Lear to terminate under paragraph 2(a) at

any time and continue to manufacture covered gyros and pay no further royalties and gain the invention by assignment and release would be the most unreasonable construction of paragraph 2(a) that is conceivable. Clearly, Adkins did not intend to give Lear this right, and Lear could not reasonably understand that it was acquiring this right. However, implying the stipulation of prior or concurrent cessation of manufacture into paragraph 2(a) does make the contract reasonable and accords with the parties' actual intent as garnered from other provisions of the license agreement. Implying stipulations which are necessary to make a contract reasonable does not make a new contract for the parties, as Lear asserts, but, rather, results in a construction in accordance with the parties' actual intention at the time of entering into the contract [p. 34]

Finally, it should not be forgotten that Lear alone drafted the license agreement and caused the uncertainty, if any, in paragraph 2(a) to exist, and which, therefore must be resolved in Adkins' favor, Civil Code §1654.

Lear cites several cases for its argument that it had the right under paragraph 2(a) to terminate the contract at any time and for any reason and that thereupon all of Adkins' rights ceased. Principal reliance is placed upon *Stimpson Computing Scale Co. v. W. F. Stimpson Co.* (1900, Cir. 6), 104 Fed. 893. There, however, the license agreement expressly stated that the licensee could terminate by six months' notice of intention "to discontinue the manufacture and sale of such scales *under this contract.*" (Emphasis added.) The court held only that there being no other provisions from which a duty to cease manufacture could be implied, the phrase

"under this contract" must be given its literal meaning and meant that the licensee did not have to cease manufacture, but only cease manufacture under the contract. Not only was the language of the termination clause completely different in the *Stimpson* case, but, in addition, there was no provision for yearly minimum royalties which would continue even if the licensee ceased manufacture, as there is in our case, and consequently the *Stimpson* case is entirely distinguishable.

American Machine & Metals v. De Bothezat Impeller Co. (1949, D.C., S.D., N.Y.), 82 F. Supp. 556, is also distinguishable. In that case defendant assigned certain patents for fans and leased machinery and equipment for their manufacture to plaintiff and went out of the fan business. The contract provided that upon six months' notice from plaintiff the assignment [p. 35] agreement (not the license agreement) would end. The defendant then went back into the fan business. In holding on a preliminary motion that plaintiff could terminate the assignment agreement and continue in the fan business, the court analogized the situation to two joint venturers, and cited the rule that after termination of a joint venture agreement both parties are free to engage in the same business.

In our case the parties were not competing manufacturers and the rule has no application. Moreover, the fact that the lease agreement did not terminate in the *De Bothezat* case is a strong indication that plaintiff did not have to go out of business upon terminating the assignment.

In *Brawley v. Crosby, etc. Foundation, Inc.* (1946), 73 Cal. App. 2d 103, a license agreement contained a

clause permitting the licensee to cancel on sixty days' notice, and the sole issue was not whether the licensee had to cease manufacturing in order to effectively exercise that right, but whether an obligation to manufacture during the 60-day period was to be implied to prevent a failure of the agreement for lack of mutuality.

Union Switch & Signal Co. v. Johnson (1896, Cir. 3), 72 Fed. 147, involved only the question of whether an express provision prohibiting manufacture after exercise of a one-year termination clause by one party was effective after both parties mutually terminated the entire agreement.

In all the other cases cited by Lear for the proposition that matter expressed in one part of an agreement will not be read into another part, the question was not whether to imply a condition precedent to exercising a [p. 36] termination clause, but whether to impose an additional obligation on one party. For example, in *County of Alameda v. Southern Pacific Co.* (1961), 55 Cal. 2d 479, one party agreed to indemnify the other in two situations only. The court held that a third situation could not be added by implication. Moreover, in that case the party seeking to imply the additional obligation had prepared the contract. Further, there was no intention discernible from any other paragraph that indemnity in a third situation was to be added.

Similarly, in *Foley v. Euless* (1931), 214 Cal. 506, plaintiff agreed to process raisins delivered by defendant, and the sole issue was whether, in the absence of an express provision requiring delivery, defendant was obligated to deliver any raisins. In finding that defendant was not, the court held that implied obligations are to

be read into an agreement only where necessary to carry out the intention of the parties or to reach the result actually intended by them.

This case supports Adkins' argument rather than Lear's, as clearly the parties did not intend that Lear could terminate at any time under paragraph 2(a), continue thereafter to manufacture royalty-free, and receive an assignment of Adkins' invention and a release of all causes of action under the three other agreements.

Thus, implying cessation of manufacture into paragraph 2(a) as a condition precedent to termination of the license is necessary to carry out the original intention of the parties that Adkins receive a royalty for gyros manufactured and sold by Lear which incorporate his invention unless one of the conditions subsequent set forth in paragraph 6 occurred. [p. 37]

Consequently, since Lear did not cease manufacture of covered gyros on April 8, 1959, its attempt to terminate the license agreement on that date under paragraph 2-(a) was only a breach of contract and did not terminate the license agreement, which remained in effect. [p. 38]

APPENDIX H.

Pages 42-46 of Adkins' "Petition for Hearing" in the California Supreme Court.

B. Lear Could Not Exercise Paragraph 2(a) Termination Without Prior or Concurrent Cessation of Manufacture of Gyros Embodying Adkins' Invention.

As indicated *supra,* the District Court of Appeal did not consider at all whether the license agreement was terminated by Lear's letter of April 8, 1959 under paragraph 2(a). That paragraph states, in the last sentence, that "Lear shall have the right, on 90 days' prior written notice, to terminate any one or more of the licenses herein granted," but is silent on Lear's right to manufacture after termination and also silent on Lear's obligation for royalties if it does so.

The obvious purpose of the paragraph 2(a) termination clause was to permit Lear to terminate annual minimum royalty payments required by paragraph 3(g) if Lear ceased manufacturing gyros using Adkins' invention. Under paragraph 3(g) Lear was obligated to pay Adkins minimum royalties of $1,500.00 a year for 16 years (i.e., $24,000.00), even if it ceased manufacture of gyros containing Adkins' invention, as long as the license was in effect. Paragraph 3(g) expressly states that minimum annual royalties are to be paid "provided the licenses are *in force and effect,*" but paragraph 3(g) does not contain any provision for Lear to terminate their force or effect if Lear ceased manufacturing gyros using Adkins' invention. Obviously, the "force and effect" phrase is a reference to paragraph 2(a), which contains Lear's only right to terminate the license (not the agreement) which is not expressly tied to the hap-
[p. 42] pening of a condition. Thus, paragraphs 2(a)

and 3(g) must be read together to mean that if Lear ceases manufacturing gyros utilizing Adkins' invention, it may then terminate annual minimum royalties required by paragraph 3(g) by exercising paragraph 2(a) termination.

Furthermore, in the absence of any duty to manufacture, which is expressly stated in paragraph 3(g), the 90-day period of paragraph 2(a) can only be for Lear's benefit, and must mean that like the 90-day period provided in paragraph 3(g) if Adkins terminates, Lear has 90 days in which to complete and sell gyros containing Adkins' invention then in the process of being manufactured. Any other construction renders the 90-day period totally meaningless. Thus, the 90-day clause of paragraph 2(a) is still another indication that paragraph 2(a) termination by Lear requires prior or concurrent cessation of manufacture of gyros containing Adkins' invention.

Civil Code Section 1643 states that "a contract must receive such an interpretation as will make it lawful, operative, definitive, reasonable and capable of being carried into effect, if it can be done without violating the intention of the parties." Civil Code Section 1638 states that the language of a contract is to govern its interpretation if that language is clear, explicit and does not involve an absurdity, *Kohn v. Kohn* (1950), 95 Cal. App. 2d 708. It would be absurd to assume that Adkins was exchanging his right to a "mutually satisfactory royalty" under the first agreement of December 29, 1951 for $500.00 upon execution of the license agree-
[p. 43] ment, which would be the only certain consideration if, in conjunction with the right not to manufacture at all, Lear also had the right to terminate

under paragraph 2(a) and continue to manufacture and sell gyros embodying Adkins' invention royalty-free. This conclusion is reinforced by paragraph 6 which gives Lear the right to manufacture without further payment of royalties only in the event the Patent Office refuses to issue a patent on the invention disclosed containing substantial claims, or in the event the patent is held invalid. Thus, since Lear's only right to manufacture royalty-free is expressly stated in paragraph 6, it is not to be read into paragraph 2(a), *County of Alameda v. Southern Pacific Co.* (1961), 55 Cal. 2d 479. Rather, paragraph 2(a) should be interpreted in accordance with the reasonable intention of the parties that in the event Lear ceased manufacturing gyros using Adkins' invention, it should thereafter be able to avoid the payment of minimum annual royalties.

In addition, paragraph 6 would be wholly redundant if Lear could terminate for any reason and at any time under paragraph 2(a) and thereby avoid further royalty payments. Similarly, paragraph 11 would be wholly redundant if Lear could terminate at any time and for any reason and thereby avoid further royalty payments. Under paragraph 11, Lear received four options upon Adkins' leaving Lear's employ, three of which required payment of increased minimum royalties and one of which required only payment of paragraph 3(g) minimum royalties and actual earned royalties. If Lear could terminate under paragraph 2(a) for no reason at all and pay no further royalties at all, this would constitute a fifth option, thus making paragraph 11 wholly redundant. [p. 44]

A further argument also supports Adkins' construction of paragraph 2(a). Under paragraph 3(g) Adkins

could terminate Lear's right to manufacture gyros using Adkins' invention if Lear was in breach by failing to make minimum royalty payments. Under paragraph 10 Adkins could terminate the license agreement if Lear failed to pay earned royalties. Like paragraph 2, paragraph 10 is also silent on the subject of further manufacture after termination, and is also silent on Lear's obligation to pay royalties if it continued to manufacture gyros containing Adkins' invention after a paragraph 10 termination by Adkins. It would be absurd to say that Adkins could prevent further manufacture only if Lear failed to pay minimum royalties and not if Lear failed to pay earned royalties, and equally absurd to say that if Lear continued manufacture after paragraph 10 termination, it would not be liable for earned royalties. Rather, it is obvious that the parties so clearly understood that Lear's right to manufacture gyros using Adkins' invention would end upon termination in both the paragraph 2(a) and paragraph 10 situations, and that Lear would be liable for earned royalties if it thereafter continued manufacture, that they did not find it necessary to so state in those paragraphs, but stated it only in paragraph 3(g) for failure to pay minimum royalties where there might be some question.

Even apart from the foregoing construction arguments, paragraph 2(a) could not be read to permit Lear to terminate at any time and for no reason at all and thereafter continue to manufacture gyros using Adkins' invention royalty-free. Civil Code Sections 1655 and 1656 require that stipulations which are necessary to make a contract reasonable be implied therein, *Brawley v. Crosby Research Foundation* (1946), 73 Cal. App. [p. 45] 2d 103. Any interpretation which would permit Lear to terminate under paragraph 2(a) at any time

and for no reason and continue to manufacture gyros utilizing Adkins' invention royalty-free would be the most unreasonable construction that could be placed on the license agreement, as it is obvious that the intent of the parties was that Lear was to pay royalties to Adkins as long as it manufactured gyros containing his invention, subject only to its right to terminate under paragraph 6 if no substantial claims issued. Thus, implying in paragraph 2(a) the stipulation of prior or concurrent cessation of manufacture before exercise of the termination right stated therein makes the contract reasonable and accords with the parties' actual intent as garnered from the other provisions of the license agreement.

Finally, it should not be forgotten that Lear alone drafted the license agreement [Rep. Tr. p. 2500, lines 2-5] and caused the uncertainty in paragraph 2(a), if any, to exist, and which must, therefore, be resolved in Adkins' favor, Civil Code §1654; *Hunt v. United Bank and Trust Co.* (1930), 210 Cal. 108.

Thus, since Lear manufactured gyros containing Adkins' invention before April 8, 1959 and continued to do so after that date, Lear never had the right to effect and therefore never effected a paragraph 2(a) termination of the license agreement, and its letter of that date was only a breach of contract which did not terminate the license agreement. [p. 46]

APPENDIX I.

Pages 39-64 of Lear's "Opening Brief for Lear Concerning the Directed Verdict and the Denial of Lear's Motion for Judgment Notwithstanding the Verdict, All With Respect to the 2156 Gyroscope."

II.

The License Agreement Was Terminated on April 8, 1959, and Was of No Force or Effect After That Date.

On April 8, 1959, defendant notified plaintiff by registered mail (which was received by plaintiff) as follows:

> "Reference is made to License Agreement between you and Lear, Incorporated dated the 15th day of September, 1955.
>
> "Pursuant to its rights of termination as contained in said agreement, including but not limited to Paragraphs 2(a) and 6 thereof, Lear, Incorporated hereby exercises its rights and options to terminate the agreement and licenses therein granted" [Ex. 39].

Paragraphs 2(a) and 6 of the license agreement [Ex. 8] state in pertinent part as follows:

> "2. GRANT.
>
> (a) . . . Lear shall have the right on ninety days' prior written notice to Adkins, to terminate any one or more of the licenses herein granted."
>
> "6. INVALID PATENTS.
>
> In the event . . . the U. S. Patent Office refuses to issue a patent on the substantial claims of the application attached as Exhibit 'B' [this is

plaintiff's application Serial No. 410,237 which became Patent No. 2,919,586] or if such a patent so issued is subsequently held invalid, . . . then in any of such events Lear at its option shall have the right forthwith to terminate the specific license so affected or to terminate this entire Agree- [p. 39] ment and no further royalties shall thereupon be payable under the license so terminated or under this Agreement if Lear shall have elected to terminate this Agreement in its entirety."

In accordance with the provisions of paragraph 9 of the license agreement [Ex. 8] defendant had the right to monitor the proceedings concerning plaintiff's patent application.

By April, 1959, plaintiff's patent application had been pending for more than five years, and no claims directed to bearing mountings had been allowed. These claims had been repeatedly rejected by the Patent Office as being unpatentable, and plaintiff had not obtained allowance of any substantial claims or any claims that could possibly provide patent protection for defendant's products.

On April 8, 1959, defendant exercised its rights to terminate the agreement because the agreement provided no benefit to defendant in return for the more than $30,000 in royalties it had paid plaintiff.

Some unidentified person in the law firm representing plaintiff interviewed the Examiner and without setting forth the reasons for getting the Examiner to reverse his position, obtained an agreement from the Examiner that some newly drafted claims 29-36 would be allowable. These claims were filed in the Patent Office on April 30, 1959 [Ex. P—p. 68], approxi-

mately three weeks after the license agreement was terminated. They were allowed by the Patent Office on July 1, 1959 [Ex. P—p. 70], three and one-half months after the agreement was terminated, and the patent issued about nine months after the agreement was terminated. During this period of time, defend- [p. 40] ant's former Patent Agent, Perry Turner, was representing plaintiff and actually signed his name or caused his initials to appear on papers filed in the application during the part of this period after he became admitted to the California Bar on June 10, 1959 [Ex. P—pp. 71, 73, 83, 84]. Mr. Turner worked under the supervision of Mr. Patton who signed the other papers filed in the application [p. 1881, Ex. P]. He asserted the attorney-client privilege with respect to the full extent of his participation [Clk. Tr. pp. 422-427].

Thus, defendant terminated the license agreement before any pertinent claims were allowed, while Mr. Turner was seeking allowance of the application on behalf of plaintiff, and before the patent issued on January 5, 1960.

The trial court ruled on numerous occasions that the license agreement was terminated on April 8, 1959, as a matter of law.

At the beginning of the trial the court stated to the jury:

> "There was a clause in this agreement permitting defendant to withdraw or terminate under it, which they did . . ." [p. 239].

During some of the proceedings in chambers, the following colloquy took place:

> "Mr. Hartz: Yes; under the terms of the agreement, under Paragraph 2(a) which provides that

Lear on 90 days written notice may terminate this agreement, under Paragraph 6 which states that in the event the U. S. Patent Office refuses to issue a patent on substantial claims, Lear has the option to forthwith terminate this agreement. [p. 41]

The Court: There is no question about the right to terminate.

Mr. Hartz: All right.

The Court: Now, I am talking about the Lear device, the Michigan device.

Mr. Hartz: Yes.

Mr. Cohen: I assume I am going to get the right to be heard at length on this.

The Court: After the notice of termination do you feel that you thereby acquired the right to use the Adkins device without burden or liability of any kind?

Mr. Hartz: Only subject to his patent rights, yes, your Honor, that is correct.

The Court: In other words, you feel that Adkins is remitted solely to an action for infringement.

Mr. Hartz: That is correct. That has been our position from the beginning.

Mr. Cohen: That is directly contrary to the holding in Seagren v. Smith and 63 Cal. App. 2d which covered this exact point and is the only case in California that covers this point. So they are arguing in the face of authority from the District Court of Appeal." [pp. 2583-2584].

Toward the end of the trial the court stated during the proceedings in Chambers:

"Mr. Hartz: Yes, your Honor, but we submit that we, having terminated the license, can challenge

the validity and we submit that the Stimson Computing Scale Company case, and these two sections in Walker on Patents, which is Section 385 and Section 391 make this the rule that you can contest the validity after termination. [p. 42]

Mr. Cohen: Your Honor has already ruled that Seagren v. Smith is applicable as to that and they have not effectively terminated the agreement under Seagren v. Smith, which is the holding of that case.

The Court: No, I hold that they have terminated the agreement, but they are liable for any royalties that may have been incurred before or after if they continue to use the device that was under the protection of the Adkins patent." [p. 2627].

Plaintiff endeavored to straddle the issue of termination, and he submitted alternative jury instructions to the effect that the agreement was not terminated and to the effect that the agreement was terminated. By way of example, plaintiff's requested instruction No. 47 states in part:

"You are instructed that because Lear continued to manufacture 2152, 2153 and 2156 gyros which are covered products after April 8, 1959 that Lear's attempt to exercise the termination right under Paragraph 2(a) was wholly ineffective to terminate the license of the bearing alignment invention for the reason that Lear could only exercise 2(a) termination if at the same time or before exercise thereof Lear stopped manufacture of gyros incorporating the bearing alignment invention." [p. 3400, lines 14-23].

This instruction, along with several others to the same general effect, was refused.

Toward the end of the trial plaintiff took the position that the agreement was terminated as a matter of law, but that Lear was liable under the unjust en- [p. 43] richment doctrine of *Seagren v. Smith* (1944), 63 Cal. App. 2d 733. Plaintiff even obtained a jury instruction to that effect which states:

> "PLAINTIFF'S REQUESTED JURY INSTRUCTION NO. 49
>
> "Even though the license of the bearing alignment invention was terminated by Lear's letter of April 8, 1959 and of no further force or effect, Lear is nevertheless liable to Adkins for royalties, if you find that any products covered by Adkins' patent were thereafter manufactured and sold by Lear." [p. 3080].

This portion of plaintiff's requested instruction No. 49 was given without modification by the court. Plaintiff cited *Seagren v. Smith,* as authority for this portion of the instruction. A second paragraph of the requested instruction No. 49 was stricken [p. 2772].

The following colloquy took place in chambers with respect to jury instructions concerning the issue of termination:

> "The Court: I was under the impression that your stipulated statement of facts support the instruction that of April 8, 1955 [sic] the agreement was terminated.
>
> Mr. Hartz: It was stipulated the letter was sent and received and it is our position that this is sufficient for the termination. This is all that was re-

quired. All the conditions were met and as a matter of law the termination was effective.

The Court: I don't know what question of fact remains.

Mr. Cohen: That is the point, your Honor. I think it should be removed from the jury as not a [p. 44] question of fact for them since your Honor has instructed them on it as a question of law.

The Court: Oh, you are not objecting to the recital of the matter as a question of law?

Mr. Cohen: Not in that form.

The Court: I gave it to the jury because it seemed to me that for them to get the whole picture it was necessary for them to have the facts of termination before them. If there is any question in anybody's mind as to what the jury could reasonably feel about it, why, I will make it very clear to them.

Mr. Cohen: Your Honor stated, the effect was that the letter did effect the termination, but that as a matter of law they were still liable for the agreed royalty rate if they continued to manufacture the product. Now, this, as I say, and I think that Mr. Hartz agrees, is a matter of law. Your Honor has correctly instructed them on this matter of law, as you determined the matter of law to exist, and it should not go to them under the instruction that they can find as a matter of fact that the agreement is terminated in conflict with your Honr's instructions on that subject.

The Court: I am afraid I don't follow you.

Mr. Cohen: *What I am saying is that your Honor instructed them that the agreement was terminated by the letter of April 8, 1959.*

The Court: *Yes.*

Mr. Cohen: *But that thereafter Lear would continue to be liable for royalties at the agreed royalty rate if they continued to manufacture the products that are covered by the patent.* [p. 45]

The Court: *You agree with that, do you not?*

Mr. Cohen: *Yes, your Honor.*

Mr. Hartz: We do not, your Honor.

Mr. Cohen: That is the Seagren v. Smith case, which is a correct proposition of law. However, the jury must find in accordance with that instruction of law, and does not have the right to find it as a question of fact that the agreement was terminated and that therefore no further royalties are due." [pp. 3042-3043]. (Emphasis ours.)

Thus, plaintiff and defendant and the trial court all agreed that the license agreement [Ex. 8] was terminated as a matter of law. Plaintiff and the trial court were of the opinion that any liability would be based upon the unjust enrichment doctrine as set forth in *Seagren v. Smith* (1944), 63 Cal. App. 2d 733. Defendant did not agree that *Seagren v. Smith* applies, and this issue will be discussed in section IV of this brief.

It is submitted further that the directed verdict is in error because the license agreement was terminated, and the law is clear that the doctrine of license estoppel does not continue after termination of the agreement. The case of *Seagren v. Smith, supra,* is not in conflict with this principle because the issues of validity and infringement of a patent issued after the termination of a license agreement were not raised or decided in that case.

It is also submitted that the directed verdict is in error concerning the infringement issue because the doctrine of licensee estoppel has never applied to infringement or the questions of coverage.

The directed verdict is also in error because there is a complete failure of consideration to support any obli- [p.46] gation imposed by law, such as under the unjust enrichment doctrine of *Seagren v. Smith.*

When a license includes a termination provision which is exercised by either party, any estoppel to contest validity of the licensed patent does not continue beyond the date of termination. The reason for the rule is that after termination the licensor-licensee status is at an end and the parties stand in the same position and with the same rights that strangers have.

Davis v. Buck-Jackson Corporation (4th Cir. 1956), 230 F. 2d 655;

Miehle Printing Press & Mfg. Co. v. Publication Corporation (7th Cir. 1948), 166 F. 2d 615;

Measurements Corp. v. Ferris Instruments Corp. (3rd Cir. 1947), 159 F. 2d 590;

Tate v. Baltimore & O. R. Co. (4th Cir. 1915), 229 Fed. 141;

Stimpson Computing Scale v. W. F. Stimpson (6th Cir. 1900), 104 Fed. 893;

Walker on Patents (Deller's Ed.), 1937, pp. 1496 and 1505.

The basic rules of licensee estoppel are summarized in 69 *Corpus Juris Secundum,* §160.a(1), page 621 wherein it is stated:

"In general a licensee, during the continuance of the license, is estopped to deny the validity of the patent on any ground."

See also 69 C.J.S., §160.a(3), page 624.

And in 69 *C.J.S.*, §254c, page 784, wherein it is stated:

"As a general rule the lawful cancellation of a patent license relegates the parties to their status prior to the granting of the license. . . . . [p. 47]

Except as the agreement may otherwise provide, on proper termination of the license, the rights and liabilities of the licensee thereunder are likewise brought to an end . . . he (the licensee) is no longer estopped to deny the validity of the patent . . ."

In *Miehle Printing & Mfg. Co. v. Publication Corporation, supra,* the court held that licensee estoppel does not survive termination of the license agreement, stating, at page 618:

"We recognize, of course, the rule by which a patent licensee may be estopped during the term of the license to dispute the validity of the patent, but we are of the view that it has no application where the licensee effects a valid cancellation of the license agreement, as was done here."

The case of *Stimpson Computing Scale Co. v. W. F. Stimpson, supra,* involved a very similar factual situation to that of the present case. In the *Stimpson* case the licensor had a patent application pending in the Patent Office and the patent issued at a later date. The license agreement provided that the licensee shall have the right to determine the agreement and its obligations

thereunder by giving six months' notice in writing to the licensor. The court held that the licensee could terminate the agreement by giving the prescribed notice and stated at page 897:

> "... That being out of the case, we can find no ground on which to restrain the manufacture and sale by the appellants of the articles mentioned. It may expose the appellant to a suit for infringement, but that, as we have said, is foreign to the purpose of the present suit. Aside from the patent, [p. 48] there is nothing to prevent the appellant from selling the same kind of goods as it sold during the term of the contract."

The case of *The Armstrong Company v. Shell Company of California* (1929), 98 Cal. App. 769 is to the same effect. The majority decided the *Armstrong* case on another and separate issue. However, this does not detract from the fact that the above rules of law are recognized in California. As stated in the *Armstrong* case at page 778:

> "Appellant next contends that the trial court erred in overruling plaintiff's motion to strike out all testimony, exhibits and proofs offered for the purpose of showing that plaintiff's patent was invalid. It is a well-recognized rule of law that a licensee under a patent right cannot dispute the validity of his licensor's patent. But an apparent exception to the rule of estoppel exists where the licensee repudiates the license."

The exception is even more applicable where the license agreement is terminated in accordance with termination provisions therein, as in the present case, be-

cause the former licensee thereafter neither receives nor enjoys any benefit or protection under the patent or patent applications covered by the agreement. The analysis in the *Armstrong* case continues on page 779:

> ". . . . A licensee is estopped to show the invalidity of licensed patents as a defense to an action for royalties only so long as the relation of licensor and licensee continues and the licensee uses and enjoys the benefit and protection of the patents covered by the agreement. . . . A licensee, if the pat- [p. 49] ents are in fact invalid, may, without waiting to be evicted, denounce and abandon the license, and after giving notice thereof to the licensor, may defend against an action to enforce the license or to recover royalties subsequently accruing, with the same freedom as may a stranger to the patent, and the licensor is remitted to his infringement suit."

It is noted in the *Armstrong* case that the situation is more favorable to the former licensee when the agreement is terminated rather than repudiated. This recognition that a termination provision always allows the former licensee to contest the validity after termination and an analysis of the reason for licensee estoppel is set forth in the *Armstrong* case, beginning on page 779:

> ". . . The contention is made and some support therefor may be found in the books, that a licensee cannot, *in the absence of a provision permitting the license to be terminated,* contest the validity of patents covered by the agreement, even after renunciation and notice. This contention originates in the commonlaw doctrine of estoppel by covenant. It requires to support it, first, a special admission, of

fact, namely, that the patent is valid, or that the licensor is the first and true inventor of the invention covered by the patent; and second, a deed or covenant under seal which, at common law, barred a party thereto from disputing the truth of an admitted fact. It is doubtful if this rule ever had any application in equity, which from early days, gave relief against deed or agreements under seal in certain situations; but, be that as it may, the true rule, in my opinion, now is that the licensee, whenever he ascertains that the patents covered by the license [p. 50] agreement are invalid, may refuse to be further bound thereby, and, upon repudiation and notice, may thereafter defend against an action for royalties or an infringement suit as freely as may a stranger. This is particularly true in a case like the present, where the license agreement contains no recital or clause admitting the validity of the patents and no stipulation not to dispute or contest the validity thereof. If the patents are in fact invalid, then there is no continuing consideration for the agreement, and as was said by Mr. Justice Brown in *Pope Mfg. Co. v. Gormully,* 144 U.S. 234 [36 L. Ed. 414, 12 Sup. Ct. Rep. 636, see, also, Rose's U.S. Notes]: 'It is as important to the public that competition should not be repressed by worthless patents, as that the patentee of a really valuable invention should be protected in his monopoly.'" (Emphasis added.)

The limits of the licensee estoppel doctrine were recognized as early as 1886 in the case of *Brown v. Lapham* (S.D. N.Y., 1886), 27 Fed. 77. In the *Brown* case the defendants were prior licensees of plaintiff who had

brought suit against them in equity and who had moved for a preliminary injunction. The court answered plaintiff's motion in the following manner as set forth at page 77:

> ". . . The plaintiff relies upon the estoppel of the defendants to deny the validity of the patent growing out of the license and the operating under it by them. There is no fair question but that a licensee under a patent is estopped to deny its validity of any question arising out of that relation between the parties. *Kinsman v. Parkhurst,* 18 How. 289. [p. 51] It does not follow that he will be always estopped because he has stood in that relation. When he stands out from under the license, and claims nothing from it, and does nothing more under it. with full knowledge to the licensor of his position, he would appear to be at as full liberty to contest the patent as anyone . . ."

Additional authorities to the same effect are:

H. Tibbe & Son Manufacturing Co. v. Heineken (Circuit Court S.D. N.Y. 1889), 37 Fed. 686;

DeCrew v. Union Bag & Paper Corp. (N.J. 1944), 57 F. Supp. 388;

Howe v. Atwood (E.D. Mich. 1942), 47 F. Supp. 979;

Frost Ry. Supply Co. v. T. H. Symington & Son (Md. 1938), 24 F. Supp. 20;

Chance v. Lehigh Navigation Coal Company (E. Pa. 1938), 25 F. Supp. 532;

Eskimo Pie Corporation v. National Ice Cream Co. (W.D. Ky. 1927), 20 F. 2d 1003;

Bituminous Products Co. v. Headley Good Roads Co. (D. Del. 1924), 2 F. 2d 83.

With respect to infringement, even an existing licensee or assignee to which the doctrine of licensee estoppel applies, is not liable for royalties under a license contract when the patent claims construed in light of the specification, patent history, and prior art do not cover defendant's manufactured products.

Westinghouse Electric & Mfg. Co. v. Formica Insulation Co. (1924), 266 U.S. 342; [p. 52]
Baldwin Rubber Co. v. Paine & Williams Co. (6th Cir. 1939), 107 F. 2d 350;
Farmland Irrigation Co. v. Dopplmaier (1957), 48 Cal. 2d 208;
Garland v. Remington Arms Company (S.D. N.Y. 1956), 137 F. Supp. 622.

It is also settled California law that mere nonpayment of royalties allegedly due under a licensed application is not a breach, and does not constitute a basis for awarding royalties when the claims of the patent which issues do not cover the manufactured products or the invention as originally represented and warranted by the licensor. *Marvin v. Mills Alloys, Inc.* (1939), 31 Cal. App. 2d 549.

Furthermore, a licensee who is estopped to consent validity, is not liable for royalties under a license contract even if the claims of a subsequently issued patent literally read on manufactured products, when it is shown that such products are built wholly according to the prior art teachings plus ordinary mechanical skill. *Scott Paper Co. v. Marcalus Mfg. Co.* (1945), 326 U.S. 249; *Casco Products Corp. v. Sinko Tool & Mfg. Co.* (7th Cir. 1940), 116 F. 2d 119, cert. denied (1941), 312 U.S. 693.

Plaintiff has relied upon the cases of *Automatic Radio Mfg. Co. v. Hazeltine Research* (1950), 339 U.S. 827; *Bowers Mfg. Co. v. All Steel Equipment, Inc.* (9th Cir. 1960), 275 F. 2d 809; and *Del Riccio v. Photochart* (1954), 124 Cal. App. 2d 301 [Clk. Tr. p. 2326] in support of his assertion that defendant cannot contest either the validity or infringement of plaintiff's patent. These cases are not in point. [p. 53]

The *Automatic Radio* case merely restated the rule of licensee estoppel where the license was still in effect and there had been no termination or end to the agreement.

The Ninth Circuit case of *Bowers* and the California case of *Del Riccio* do not in any way negate the rule of law that after termination of the license agreement there is no estoppel.

The *Bowers* case was an action to require specific performance of a non-exclusive license concerning a patent which had already issued. The license was entered into to avoid an infringement suit by the patent owner after exchange of correspondence concerning infringement of the patent. The license agreement had certain cancellation provisions, but the licensee did not terminate the license in accordance with these provisions of the agreement. Instead, the licensee attempted to repudiate the agreement on the basis of failure of consideration. The court pointed out that the consideration for the non-exclusive license was essentially a shield from suit for infringement by the grantor, and hence the invalidity of the patent would not constitute failure of consideration for such a license and, thus, would not support a repudiation. The court went on to point out, however, that where the consideration is the monopoly

value of the patent, invalidity of the patent would constitute failure of consideration for such a license.

The patentee in the *Bowers* case summarized the question before the court as follows:

> "The execution of the license agreement is admitted by BOWERS, as are all of the facts leading up to the execution of the license agreement. [p. 54] BOWERS contends that as a non-exclusive licensee it has the right at any time to repudiate, abandon, and terminate the license agreement by its unilateral action, notwithstanding the fact that the license agreement in paragraph III (R-38) specifically provides that BOWERS shall have the right to cancel the agreement only in the event (a) that the Keierleber patent is held invalid by a court of competent jurisdiction; and (b) if BOWERS completely discontinues the manufacture and sale of products covered by the Keierleber patent. Except for these two specific grounds for termination, neither of which has occurred, the license, as provided in paragraph I (R 37), was to extend for the full term of the patent, which term ends in July of 1964.
>
> "The single question on this appeal is one of law and may be simply stated as follows: May a nonexclusive licensee by a unilateral notice of termination effectively terminate a license agreement contrary to the terms thereof" [Clk. Tr. p. 1808].

The *Bowers* case merely held that a non-exclusive license entered into as "a shield from suit for infringement by the grantor" [275 F. 2d 809, 811] cannot be repudiated or terminated contrary to the provisions of the license agreement. Thus, the court held that the

repudiation or puported termination did not terminate the license agreement, and the court ordered specific performance of the agreement. In the present action both plaintiff and the court have agreed that the license agreement was terminated as a matter of law in accordance with the provisions of the agreement. Hence, the *Bowers* case does not apply at all. [p. 55]

Moreover, the *Bowers* case involved a non-exclusive license concerning an issued patent having known claims at the date of the license agreement. The licensee even admitted infringement. The license stated:

> "There is no question in our mind that one of our clamps is fully covered by your patent . . ." [Clk. Tr. p. 1801].

In the present case the license was exclusive with a provision that it could become non-exclusive upon certain conditions subsequent, and it was based upon claims in a patent application which were never obtained. The claims that were ultimately obtained do not cover defendant's products and they are invalid. The defendant had the right to participate in the enforcement of any patent which issued against defendant's competitors [Clk. Tr. p. 22]. The competitive value of the patent was the consideration in the present action and it failed to materialize, whereas a mere "shield from suit for infringement" was the consideration in the *Bowers* case. There was a failure of consideration in the present action, but not in *Bowers.*

The *Del Riccio* case, *supra,* is to the same effect as the *Bowers* case. In the *Del Riccio* case a license agreement concerning an issued patent was entered into in order to compromise existing litigation between the parties. The court held that the non-exclusive licensee

could not contest the licensed patent because the consideration for the agreement was primarily the compromise of previously existing litigation between the parties concerning the patent. Thus, the primary consideration was not an enforceable patent monopoly to be established by the allowance of substantial claims in a valid patent, as it was in the present case. [p. 56]

In the present action everyone is in agreement that the license agreement was terminated and of no further force or effect after April 8, 1959. Thus, the doctrine of licensee estoppel simply does not apply.

Plaintiff has no protectible property rights after the agreement was terminated other than the rights conferred by the United States Patent Laws. Defendant has no duty to plaintiff after the agreement was terminated. Hence, there is no basis for any obligation subsequent to April 8, 1959, as more fully discussed in the next sections of this brief.

III.

No Protectible Property Rights Exist for Plaintiff Subsequent to Termination of the License Agreement Other Than His Rights Under The United States Patent Laws.

At the beginning of the trial in the introductory statements to the jury, the court characterized this action as follows:

> "There was a clause in this agreement permitting the defendant to withdraw or terminate under it, which they did; subsequently the plaintiff's employment itself was terminated.
>
> "This is an action in which the plaintiff is claiming that certain devices made by Lear came with-

in the call of this patent and that he is entitled to the royalties to an agreed rate which I think was 1¼, wasn't it?" [p. 239].

At the end of the trial the trial court in the jury instructions characterized the action in the same way, as follows:

"PLAINTIFF'S REQUESTED JURY INSTRUCTION NO. 49 [p. 57]

"Even though the license of the bearing alignment invention was terminated by Lear's letter of April 8, 1959 and of no further force or effect, Lear is nevertheless liable to Adkins for royalties if you find that any products covered by Adkins' patent were thereafter manufactured and sold by Lear." [p. 3080].

Thus, the trial court characterized the action as one to enforce plaintiff's patent apart from the license agreement, and that is what the directed verdict with respect to the 2156 gyros amounts to. If the judgment of the trial court were to be upheld, it would be *res judicata* that defendant is liable for any 2156 gyros that defendant sells during the life of plaintiff's patent which expires on January 5, 1977.

However, any rights which plaintiff has with respect to his patent, apart from those based upon the license agreement [Ex. 8], must be based upon his statutory patent rights, and not upon the common law or upon state law. Such rights arise under the United States Patent Laws, and the state courts do not have jurisdiction to enforce such rights.

28 U.S.C. 1338 states:

> "(a) The district courts shall have original jurisdiction of any civil action arising under any Act of Congress relating to patents, copyrights and trademarks. Such jurisdiction shall be exclusive of the courts of the states in patent and copyright cases."

Rights under state law which conflict with the objectives of the Federal patent laws have been considered recently by the United States Supreme Court and by many lower courts. [p. 58]

In *Sears, Roebuck & Co. v. Stiffel Co.* (1964), 376 U.S. 225, 11 L. Ed. 2d 661, the trial court and the Court of Appeals held a patent invalid for want of invention and then awarded damages to the plaintiff anyway on the grounds of unfair competition. With reference to a cause of action under state law concerning the device of the patented invention, the Supreme Court stated:

> "Just as a State cannot encroach upon the federal patent laws directly, it cannot, under some other law, such as that forbidding unfair competition, give protection of a kind that clashes with the objectives of the Federal patent laws.
>
> "In the present case the 'pole lamp' sold by Stiffel has been held not to be entitled to the protection of either a mechanical or a design patent. An unpatentable article, like an article on which the patent has expired, is in the public domain and may be made and sold by whoever chooses to do so."

In *Compco Corp. v. Day-Brite Lighting, Inc.* (1964), 367 U.S. 23, 11 L. Ed. 2d 669, the Court was

faced with a similar situation in which the trial court and the Court of Appeals had held the patent invalid and in the public domain. The Supreme Court held that damages cannot be imposed under state law with respect to copying the patented device because this would:

> ". . . interfere with the federal policy, found in Art. I, § 8, Cl. 8, of the Constitution and in the implementing federal statutes, of allowing free access to copy whatever the federal patent and copyright laws leave in the public domain. Here Day-Brite's fixture has been held not to be entitled to [p. 59] a design or mechanical patent. Under the federal patent laws it is, therefore, in the public domain and can be copied in every detail by whoever pleases."

With reference to the first cause of action based upon the express agreement concerning plaintiff's patent, the trial court found that the agreement was terminated. As an incident to interpretation of the agreement, and as an incident to plaintiff's allegation of unjust enrichment under *Seagren v. Smith,* and as an incident to the defenses of failure of consideration to support any kind of obligation, the trial court properly considered the validity of plaintiff's patent and held it invalid. Accordingly, damages cannot thereafter be imposed against defendant under guise of state law, such as on the theory of unjust enrichment found in the case of *Seagren v. Smith.* To award damages on unjust enrichment would interfere with the federal policy, found in Art. I, §8 of the Constitution and in the implementing federal statutes as set forth in the *Compco* and *Sears* cases.

The *Sears* and *Compco* decisions were considered in *Jerrold Stephens Co. v. Alladin Plastics, Inc.* (S.D.

Calif. 1964), 229 F. Supp. 536 at page 539 where the court stated that these cases:

> ". . . settle, as a matter of law, the proposition that where a party depends upon the Federal Patent Laws, it cannot, under common law State right or Statutory State right recover for unfair competition."

In the present case the only rights available to plaintiff were those arising under the agreement on patentable claims. The agreement has been terminated, and [p. 60] plaintiff cannot now assert some other right under the common law or under state law, such as the unjust enrichment doctrine of *Seagren v. Smith,* in an attempt to enforce the patent rights which have been declared to be invalid and hence in the public domain.

The *Sears* and *Compco* decisions were also considered in *Cable Vision, Inc. v. KUTV, Inc.* (9th Cir. 1964), 335 F. 2d 348, at page 351, where the court stated with reference to counts for unfair competition and contract interference and violation of quasi property rights:

> "To the extent, then, that the District Court holding extended a new protectible interest beyond what the copyright laws confer, it * * * interfere(d) with the federal policy * * * of allowing free access to copy whatever the federal patent and copyright laws leave in the public domain.' Compco Corp. v. Day-Brite Lighting, Inc., 376 U.S. 234, 237, 84 S. Ct. 779, 782 (1964). This same principle likewise applies to appellees' claim of contract interference. Parties by mere expedient of an exclusive contract can not 'bootstrap' into existence rights from subject matter which at their source lie in the public domain."

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CARD 17

In a Law Review article entitled "Protection of the Inventor Outside the Patent System" the commentator stated:

> "The common law, stressing secrecy, and the patent statutes, stressing disclosure, are mutually inconsistent, at least to a considerable extent. Although a patent application is not destructive of secrecy, the issued patent contains the patentee's full and voluntary public disclosure. Accordingly, [p. 61] common law protection is thereafter unavailable, even though the patent may ultimately prove void." 43 Cal. Law Rev. 457, 467 (1955).

California statutory law is in accordance with the above quotations to the effect that plaintiff has no protectible property rights under the common law or under state law.

California Civil Code, Section 980(b) states:

> "The inventor or proprietor of any invention or design, with or without delineation, or other graphical representation, has an exclusive ownership therein, and in the representation or expression thereof, which continues so long as the invention or design and the representations or expressions thereof made by him remain in his possession."

California Civil Code Section 83(b) states:

> "If the owner of any invention or design intentionally makes it public, a copy or reproduction may be made public by any person, without responsibility to the owner, so far as the law of this State is concerned."

Prior to 1947, Civil Code Sections 980 and 983 were at times construed as providing that "ideas" were pro-

tectible property. However, the sections were amended in 1947 to unequivocally exclude "ideas" and California statutory law is now in accord with the common law with respect to ideas.

> *Desny v. Wilder* (1956), 46 Cal. 2d 715, 732:
> *Thompson v. California Brewing Co.* (1957), 150 Cal. App. 2d 469. [p. 62]

Plaintiff's alleged invention has not remained in his possession, and he has intentionally made it public. The 2156 gyros were sold and shipped to customers as early as 1956 [p. 1116, line 8; Ex. 48]. The patent which plaintiff asserts cover the 2156 gyros became a public document on January 5, 1960. In accordance with Civil Code Sections 980 and 983 plaintiff has no protectible property rights in the 2156 gyros after 1956 "so far as the law of this state is concerned", other than the rights with respect to defendant which were created by the license agreement. Those rights were terminated on April 8, 1959.

These code sections were considered by this Court in *Shanahan v. Macco Construction Co., Inc.* (1964), 224 Cal. App. 2d 327. This Court found that any common law rights which Shanahan had in housing plans and designs were extinguished when the plans and the structures were made public. Shanahan also asserted a count for unfair competition and unjust enrichment, just as plaintiff in the present is asserting unjust enrichment under *Seagren v. Smith*. This court found that there was no property right in Shanahan to support a count for unjust enrichment. The court stated at page 340:

> ". . . In any event Civil Code section 983, subdivision (b), protects defendants, in view of the

findings, from any liability for unjust enrichment under these circumstances. Also, under the common law decisions, by publishing their plans plaintiffs lost all rights to protection against the use or appropriation by another of such plans. After voluntary publication these plans were 'free as the air to common use." [p. 63]

Adkins has no property rights in the present case to support recovery on any theory over which the state courts have jurisdiction, including breach of contract and unjust enrichment.

The trial court's rulings and directed verdict which impose liability on "any products covered by Adkins' patent" even though the license agreement was terminated and of "no further force or effect" [pp. 3080, 3092] are void because the state court does not have jurisdiction or power to enforce United States Letters Patents apart from the license agreement. [p. 64]

APPENDIX J.

Rule 15(a) of the "California Rules of Court," "Appellate Rules," "Relating to the Supreme Court and Courts of Appeal."

RULE 15. FORM OF BRIEFS

(a) [*Headings, references, index and tables*] Each point in a brief shall appear separately under an appropriate heading, with subheadings if desired. Such headings need not be technical "assignments of errors" but should be concise headings which are generally descriptive of the subject matter covered. The statement of any matter in the record shall be supported by appropriate reference to the record. Every brief shall be prefaced by a topical index of its contents and a table of authorities, separately listing cases, statutes, court rules, constitutional provisions, and other authorities.

APPENDIX K.

From Pages 94-96 of Lear's "Respondent's and Cross-Appellant's Opening Brief."

1. Defendant Terminated After Plaintiff Failed to Perform Under the Agreement.

Section 6 of the agreement gave defendant the right to forthwith terminate the agreement or any one of the licenses thereof in the event, *inter alia*, that the United States Patent Office refused to issue a patent on the substantial claims of plaintiff's patent application. After repeated refusal by the United States Patent Office to issue a patent on the substantial claims over a five-year period of time, defendant served the required notice and terminated the agreement also pursuant to §6. Section 6 [p. 11 of Ex. 8] of the agreement, as far as Exhibit B to the agreement or plaintiff's patent application Serial No. 410,237 is concerned, states that

> ". . . in the event the U.S. Patent Office refuses to issue a patent on the substantial claims of the application attached to Exhibit 'B', or if such a patent so issued is subsequently held invalid . . . then in [p. 94] any of such events Lear at its option shall have the right forthwith to terminate the specific license so affected or to terminate this entire Agreement and *no further royalties shall thereupon be payable* under the license so terminated or under this Agreement if Lear shall have elected to terminate this Agreement in its entirety." [Emphasis added.]

It is to be noted that the agreement does not require defendant to wait until final action by the United States Patent Office before serving notice of termina-

tion under §6 of the license agreement. The agreement itself does not require final action and final action is not required or implied by law. *Marvin v. Mills Alloys, Inc.* (1939), 31 Cal. App. 2d 549.

The §6 termination provision states that in the event the United States Patent Office refuses to issue a patent on the "substantial claims," defendant at its option shall have the right to forthwith terminate. The "substantial claims" are those that were in the patent application on September 15, 1955, or equivalents thereof, and the Patent Office refused to allow such claims [Ex. P].

Paragraph 17 of the license agreement [Ex. 8] states:

> "It is hereby specifically agreed and understood by the parties that on the date of execution hereof the MA-1 compass Lear Model No. 5005, the Directional Steel Gyro Lear Model No. 2152, and the Vertical Steel Gyro Lear Model No. 2153, are the only products manufactured by Lear under the licenses herein granted, *which contain any of the inventions or claims* described and covered by the respective Exhibits under this Agreement." [Emphasis added.] [p. 95]

During the second week of the trial the Judge stated:

> "In Paragraph 17 there was an application pending refers to the inventions of or claims described and covered by their respective exhibits under the agreement. . . . Well, I am going to hold that Paragraph 17 was composed in view of the claims, the inventions which were embodied in the exhibit attached to the agreement at that time. . . ." [p. 1066, lines 2-9].

A review of the file history [Ex. P] and the finally issued patent [Ex. 10] clearly shows that the claims that were in the patent application at the time the agreement was executed were never allowed, that no method claims were ever allowed, that the claims that were allowed were of a completely different type than those contemplated by the parties upon the execution of the agreement, and that the claims and even the description which forms the basis for the claims were changed so that additional matter was added over and above that which existed on September 15, 1955. Furthermore, there were no claims of any type allowed concerning bearing alignment methods on April 8, 1959, when Lear terminated the agreement and this was five years after plaintiff had filed his patent application and nearly four years after the execution of the license agreement. Thus, it is clear that Lear properly terminated the license agreement under §6 in that the U. S. Patent Office had refused to issue a patent on the substantial claims relating to bearing alignment. This refusal occurred first on March 21, 1957 [Ex. P, p. 44] and it was repeated on June 20, 1958 [Ex. P, p. 57]. [p. 96]

APPENDIX L.

Pages 103 and 116 of the Deposition of John S. Adkins Taken on November 1, 1963.

Whittaker Controls.

Q Are they located here in town?

A They are located at the Van Nuys Airport.

Q You were with this Schwein Company for some six months or so; is that correct?

A From April till December.

Q And your work there was in what field?

A Engineering.

Q What products did they make?

A The products that they made were basically gyroscopes.

Q Was your work connected with gyroscopes there?

A In a fashion.

Q Could you explain that a little more?

A Actually, I wasn't really at Schwein long enough to get into anything project-wise. I never found a real spot at Schwein to work at.

Q That was April to December of 1951?

A That is right. I was never definitely associated with any specific project at Schwein.

Q But it was in the field of gyroscopes?

A Right.

Q Of course, you were at that time an engineer so that your work was in the engineering field of gyroscopes?

A That is right. [p. 103]

A Bind up of the bearings.

Q I am not sure I know what that means.

A If you get the bearings in a condition where they tend to resist rotation.

Q And what would cause that?

A Misaligned bearings could cause it.

Q What would the result be of a gyroscope that that was caused in?

A High drift precession.

Q Is that good or bad?

A That is bad.

Q At the time in late 1951 or early 1952 when you first were considering coming to work for Lear, at that time you were employed at Schwein, as I understand it?

A No, I never considered coming to work for Lear when I worked for Schwein.

Q I thought there was no gap. Was there a gap between?

A Yes.

Q Roughly, how long?

A Twenty days.

Q This was in what, December, 1951?

A December, 1951.

Q What were you doing during those 20 days?

A Loafed. [p. 116]

APPENDIX M.

Agreement Between Lear, Inc. and John S. Adkins Dated December 29, 1951.

LEAR, Incorporated
LearCal Division

11916 West Pico Blvd.
Los Angeles 64, Calif.
December 29, 1951

AGREEMENT BETWEEN LEAR, INC. AND JOHN S. ADKINS

This agreement pertains to vertical gyros which are to be fabricated at Lear, Inc., under the supervision of John S. Adkins.

All physical instruments fabricated shall become the property of Lear, Inc.

All new ideas, discoveries, inventions, etc., related to said vertical gyros become the property of Mr. John S. Adkins.

Mr. John S. Adkins agrees to license Lear, Inc. to manufacture said vertical gyros on a mutually satisfactory royalty basis.

SIGNED:

/s/ Wm. P. Lear
Wm. P. Lear
For Lear, Incorporated

/s/ John S. Adkins
John S. Adkins

APPENDIX N.

Rule 1.113 of the "Rules of Practice in Patent Cases" (37 C.F.R. §1.113).

§1.113 *Final rejection or action.*

(a) On the second or any subsequent examination or consideration, the rejection or other action may be made final, whereupon applicant's response is limited to appeal in the case of rejection of any claim (§ 1.191), or to amendment as specified in § 1.116. Petition may be taken to the Commissioner in the case of objections or requirements not involved in the rejection of any claim (§ 1.181). Response to a final rejection or action must include cancellation of, or appeal from the rejection of, each claim so rejected and, if any claim stands allowed, compliance with any requirement or objection as to form.

(b) In making such final rejection, the examiner shall repeat or state all grounds of rejection then considered applicable to the claims in the case, clearly stating the reasons therefor.

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IN THE

Supreme Court of the United States

October Term, 1967
No. 1303

LEAR, INCORPORATED,

Petitioner,

vs.

JOHN S. ADKINS,

Respondent.

Reply Brief of Petitioner in Support of Petition for a Writ of Certiorari (Filed April 9, 1968).

Introduction.

The brief of Respondent Adkins, filed in opposition to Lear's Petition, confuses the issues involved in this case. It sets forth an unnecessarily detailed restatement of the facts; it revises the Questions Presented, as stated in the Petition; and it then urges that these revised questions were not duly raised or preserved by Petitioner in the courts below and are not such as to justify review by this Court.

This Reply Brief will be directed primarily to showing that (a) to the extent that Respondent's revised questions raise new issues, they are immaterial, and (b) to the extent that Respondent's revised questions merely rephrase the questions presented by Petitioner, they were duly raised and preserved by Petitioner below and call for review by this Court.

However, we cannot ignore and therefore shall first comment briefly on the unwarranted sweeping charge made in Respondent's brief (R. Br. p. 9)[1] that the statement of the case in the Petition did not fairly or accurately set forth the material facts. The Brief seeks to support this charge by specific reference to certain matters, such as Adkins' employment in 1951, the extent to which gyros were sold to the military, and the independent development of the steel gyros in Grand Rapids, Michigan.

The failure of the Petition to mention that Adkins had other employment for a few months after he left the Air Force before he came to work for Lear is obviously immaterial. On the other hand, the irresponsibility of Respondent's charge of Petitioner's inaccuracy is demonstrated by his statement that the record does not show the extent of sales of gyros by Lear to the military. (R. Br. p. 14.) On the contrary, in its rulings on Lear's motion for judgment notwithstanding the verdict, the Superior Court stated, after reviewing the coded information as to sales furnished by Lear, that Lear's products were not put on the public market—*i.e.*, were all sold to the Government. (A, p. 95.)

As to Adkins' challenge of the Petitioner's statement (R. Br. p. 11) that the steel gyros were not independently developed in Grand Rapids, Michigan, reference need be made only to the fact that the claims of the patent are limited to supporting apparatus for the bearings, and also to the fact that Adkins testified twice, unequivocally, that he had nothing to do with

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[1]Brief for Respondent in Opposition cited herein as "R. Br. p. ....".

the design or development of the configuration of such apparatus of the steel gyros [R. T. pp. 550-552, 1709-1711, 2085-2088]. Furthermore, the man responsible for the project in Michigan testified that the Michigan steel gyros were developed independently. [R. T. pp. 1718, 1743-1744, 1754-1756, 1788.]

Further irresponsibility in Respondent's restatement of the case is found in the implication that Adkins' compensation consisted exclusively of such royalties as might be paid him, based on his ideas, discoveries and inventions; whereas, in fact, Adkins was an employee who was paid a substantial salary with bonuses, like other contemporary professional employees. [C. T. pp. 1497-1508, R. T. 212 and 213, 238-FF; C, p. 141.]

Respondent's revised questions, and Respondent's brief, do not deal at all with the issues presented by Question Three of the Petition and Respondent's fifth question raises an irrelevant issue which was not raised by any of the questions present in the Petition. Accordingly, as an aid in our discussion of Respondent's brief, we have shown the relationship of Respondent's revised questions to the Questions Presented in the Petition by setting them forth comparatively in Appendix O, annexed to this Reply Brief. It is unnecessary to discuss these revised questions to the extent that they raise issues not involved in the Questions Presented by Petitioner. We shall, however, discuss briefly certain arguments made in the Respondent's Brief with respect to the revised questions, insofar as by these arguments Respondent seeks to show that the Questions Presented in the Petition were not duly raised below or do not warrant review by this Court.

As shown by Appendix O, the Questions Presented in the Petition and Respondent's revised questions may be grouped as follows:

A. General Limitations on the Application of Licensee Estoppel.

B. Limitations on the Application of Licensee Estoppel Under a License Agreement Containing Provisions in Restraint of Trade.

C. Restrictive Conditions in a License Agreement as a Patent Misuse.

D. Applicability of Basic Criteria of Federal Patent Law in Enforcing a Patent Under a License Agreement.

We shall follow this grouping in this Reply Brief.

A. General Limitations on the Application of Licensee Estoppel.

Questions One and Two in the Petition involve the circumstances under which licensee estoppel should be inapplicable, apart from any infirmity in the license agreement based upon restrictive provisions repugnant to the antitrust laws. In any suit for royalties under a license agreement, any estoppel of the licensee to challenge the validity of the licensor's patent will, as in this case, be a determinative issue.

Thus, although Respondent's patent had been held invalid by the Superior Court, the California Supreme Court nevertheless held that validity was completely irrelevant, and acknowledged no limitations whatsoever on the estoppel of any licensee to challenge the validity of the licensor's patent. Respondent's statement (R. Br. pp. 2-3) that the Court would undoubtedly have held

Adkin's patent valid is supported only by a short excerpt from the Court's opinion directed to the narrow question whether Lear's products followed the prior art exactly. On the other hand the Superior Court considered validity in detail, and, after reviewing the record and the decisions of this Court and the federal courts, held that the patent was unquestionably invalid.

Question One has been revised by Respondent, as shown by Appendix O, into two separate questions, namely, the first and third "restated" questions in the Respondent's brief.

The first question of Respondent's brief is nothing more than a restatement of the general principle of licensee estoppel where the circumstances of the case do not make application of the principle inappropriate. As Respondent points out (R. Br. p. 6), Lear has recognized in the District Court of Appeal and in the California Supreme Court that under general principles of law, *only* so long as the licensee is "operating under the license", the licensee is estopped to contest the validity of the licensed patent, where the patent was in existence at the time of granting of the license.

Lear's recognition of the application of this general principle of estoppel where the licensee is accepting the benefits of a patent monopoly and operating under a license agreement does not, contrary to Adkins' statement, constitute an abandonment of Lear's contention that licensee estoppel has limited application and is inapplicable in many circumstances. Under Question One of the Petition, Lear challenges the applicability of estoppel where the licensee has stood out from under the license agreement and has refused to be bound by it in view of non-patentability of the claims of the ap-

plication and invalidity of the patent. By standing out from under a license agreement, a licensee subjects himself to a suit for infringement at the election of the licensor. Additionally, the licensee places the patentability of the claims and the validity of the patent in issue. This is especially true where the license agreement conditions the payment of royalties on the use of a "patentable" invention, as the license agreement does in the present case.

Under Question Two in the Petition, Lear challenges the applicability of estoppel where the license is under a patent application and a patent issues thereafter with new claims.

As shown by Appendix O, Respondent, in his revised "restatement" (fourth question) of Question Two of the Petition, erroneously narrows the scope of the issues raised by Question Two so as to exclude from consideration the important question whether a licensee under a patent application may be estopped from challenging the patentability of the claims of the application, regardless of the subsequent issuance of a patent. As pointed out in the Petition (Petition, pp. 27, 28), this Court's decision in *Westinghouse Electric & Mfg. Co. v. Formica Insulation Company* (1924), 266 U.S. 342, has properly caused the lower federal courts to question whether the licensee under a patent application should be precluded from challenging the patentability of the claims of the application. *Baldwin Rubber Co. v. Paine & Williams Co.* (6th Cir., 1939), 107 F. 2d 350; *Stubnitz-Greene Spring Corporation v. Fort Pitt Bedding Co.* (6th Cir., 1940), 110 F. 2d 192.

Whether or not a licensee is estopped to contest patentability and validity is a federal question. *Jurisdiction*

of the Supreme Court of the United States, Wolfson and Kurland, ed. 1951, p. 747. No particular tag or form of words is required to label these issues as federal questions. *New York Ex Rel. Bryant v. Zimmerman* (1928), 278 U.S. 63, 67.

Adkins asserts (R. Br. p. 26) that estoppel is purely a question of state law. This Court has clearly held to the contrary. In *MacGregor v. Westinghouse Elec. & Mfg. Co.* (1947), 329 U.S. 402, 407, this Court stated:

> ". . . Since MacGregor invoked federal law to sustain his challenge to the validity of the patent, the alleged misuse of the patent, and the price-fixing covenant, his contentions raised federal questions not governed by state estoppel or contract severability rules."

As pointed out in the Petition, throughout the appellate proceedings in the California courts, Lear challenged the patentability of the claims of Adkins' application for patent and the validity of Adkins' subsequently-issued patent. (Petition, pp. 10-17.) Furthermore, in response to Adkins' assertion that Lear was estopped to challenge patentability and validity, Lear, throughout the proceedings, denied that it was so estopped. (Petition, pp. 11-16.)

Estoppel was expressly ruled upon by the Superior Court (A, p. 94), by the District Court of Appeal (A, p. 70), and by the Supreme Court of the State of California. (A. p. 28.) Thus, the federal questions of estoppel to contest patentability and validity were expressly considered by all three of the California courts.

Where the highest state court expressly considers and determines federal issues, such as the issues pre-

sented by Questions One and Two of the Petition, it is conclusive that the federal questions were properly raised and preserved. *Raley v. Ohio* (1959), 360 U.S. 423; *Charleston Federal Savings & Loan Ass'n. v. Alderson* (1945), 324 U.S. 182; *Saltonstall v. Saltonstall* (1928), 276 U.S. 260; *Whitney v. California* (1927), 274 U.S. 357; *Manhattan Life Ins. Co. v. Cohen* (1914), 234 U.S. 123.

The Respondent challenges not only the raising below of the federal questions which concern the general applicability of estoppel, but also urges, in Points 1 and 3 of the Argument of his Brief, that these questions are without sufficient importance to justify review or have already been resolved by this Court contrary to the position taken by Petitioner.

The substantive importance and lack of clear prior determination by this Court of the issues of federal law presented by Questions One and Two of the Petition are fully supported in the Petition. However, it is appropriate to comment on certain cases relied on by Respondent which were not referred to in the Petition.

The case of *St. Paul Plow Works v. Starling* (1891), 140 U.S. 184, is greatly relied on by Respondent as establishing that a licensee is estopped to repudiate and stand out from under a license agreement on the ground of patent invalidity. (R. Br. pp. 27, 28.) That case did not so hold. On the contrary, although it was held, absent a specific termination provision, that the license was granted for the life of the patent, this Court nevertheless approved the action of the lower court in examining issues of novelty and patentability in order

to determine the validity of the licensor's patent in view of the prior art patents. The fact that the Court considered these issues shows that in fact estoppel was not applied.

Furthermore, the Respondent urges that *Bowers Mfg. Co. v. All-Steel Equipment Co., Inc.* (9th Cir. 1960), 275 F. 2d 809, indicates that, although it may be that a licensee under an exclusive license, is not estopped to challenge the validity of his licensor's patent, a non-exclusive licensee is so estopped. However, Respondent ignores the fact that at the time Petitioner first challenged the patentability of the claims in Respondent's application, its license was exclusive. Furthermore, the opinion of the Court of Appeals in *Bowers* recognizes that at least under some circumstances other federal courts do not estop even a non-exclusive licensee from challenging patent validity, citing *Viki Hosiery Corp. v. Margulies* (E.D.Pa. 1958), 164 F. Supp. 738, and *Universal Rim Co. v. Scott* (N.D.Ohio, 1922), 21 F. 2d 346. The relevance of the decision in *Bowers* is most dubious, in view of the nature of the license there involved, which license primarily granted immunity from an infringement suit. However, the court's opinion is significant in its recognition of the divergence of opinion in the lower federal courts as to the extent and applicability of licensee estoppel. Such divergence emphasizes need for clarification by this Court of that important question for the benefit of the federal as well as the state courts.

B. Limitations on the Application of Licensee Estoppel Under a License Agreement Containing Provisions in Restraint of Trade.

As shown in Appendix O, Question Four of the Petition relates to limitations on the application of licensee estoppel where a license agreement contains provisions in restraint of trade. Adkins' newly-formulated second question purports to "restate" Question Four of the Petition (R. Br. p. 6). However, Adkins has so altered this question that it is now completely different from Question Four. On the one hand, Question Four is concerned with a requirement of the license agreement, as interpreted by the California Supreme Court, that the licensee must cease manufacturing certain products in order to terminate the license agreement, irrespective of the validity of the licensor's patent rights. On the other hand, Adkins' second question deals solely with a normal provision of any license agreement which requires payment of royalties where the licensee manufactures devices covered by the patent.

Since Lear never urged that, in the absence of a valid patent, a license provision requiring payment of royalties is in restraint of trade, it did not raise below Adkins' second question. As pointed out in the Petition, however, Lear did urge, when the California Supreme Court included the requirement in construing the agreement, that since the inclusion in a license agreement of a requirement that a licensee must cease manufacturing its products in order to terminate the license agreement is unlawful in the absence of a valid patent, the licensee under such an agreement should not be estopped to challenge the validity of the patent. (Petition, pp. 18-19.)

Adkins recognizes the difference, from the standpoint of restraint of trade, between these two types of undertakings, in stating at page 25 of his Brief:

> ". . . Obviously, there is material distinction between an agreement not to manufacture or sell devices covered by a patent and a license agreement to pay a royalty if the defendant does manufacture and sell devices covered by the patent. The former is a restraint, the latter is not."

What Adkins fails to recognize is the substantial identity of an agreement by a non-licensee not to manufacture devices covered by a patent and of an agreement by a licensee that he will have to cease manufacturing devices in order to terminate the license agreement, with the implied proviso that the licensee will not thereafter manufacture these devices. The necessity of a valid patent to "rescue" the former undertaking, as an illegal restraint of trade, "from the jaws of the anti-trust laws", was recognized in Judge Frank's opinion in the case of *Nachman Spring-Filled Corporation v. Kay Mfg. Co.* (2nd Cir. 1943), 139 F. 2d 781, 784. There is equal necessity for patent validity in order similarly to "rescue" a license agreement under which a licensee must cease manufacturing products covered by the licensed patent to terminate the agreement, which cessation must impliedly continue thereafter. Any application of licensee estoppel under such a license agreement would sanction the very unlawful restraint which was condemned by Judge Frank in the *Nachman* case, p. 784, as coming within the rationale of this Court's decision in the case of *Sola Electric Company v. Jefferson Electric Company* (1942), 317 U.S. 173. Similar restraints have been condemned by this Court in subsequent decisions. (Petition, p. 31).

C. Restrictive Conditions in a License Agreement as a Patent Misuse.

As shown in Appendix O; Question Three of the Petition raises the issue whether there is an unlawful extension of a patent monopoly where a license agreement requires that a licensee cease manufacturing a product in order to terminate the agreement, even though termination is effected prior to the issuance of any patent at a time when the licensor has no protectible property rights, and irrespective of the validity of the subsequently-issued patent.

Adkins asserts that Question Three and Question Four are identical. (R. Br. p. 5.) This is not so, even though both questions stem from the same requirement of the license agreement. Question Three is concerned with a misuse of patent rights resulting from an extension of the patent monopoly, while Question Four is concerned with the inapplicability of licensee estoppel where there is a restraint of trade.

The consequences of a determination under Questions Three and Four are quite different. If there is a misuse of patent rights, the license agreement is unenforceable, regardless of patent validity. If there is a restraint of trade which is permissible only if there is a valid patent, licensee estoppel is inapplicable but the licensee is relieved from his obligations under the license agreement only if the patent is then shown to be invalid.

Adkins does not discuss Question Three, but would substitute his fifth question, raising an issue which is not in controversy. That is whether it is a violation of the antitrust laws for a license agreement to contain a provision calling for the payment of royalties during

the pendency of the application. It is quite another question whether a license agreement may validly require that, in order to terminate the agreement, the licensee must cease the manufacture of products begun before the execution of the agreement, even though at the time of termination the licensor has no patent and no protectible property rights under the federal patent laws.

The federal courts have not specifically considered whether there is an unlawful extension of the patent monopoly where such a condition on termination is imposed in a license granted under a pending patent application. However, any such condition, if enforced, would result, in substance, in an extension of the patent monopoly to cover the period prior to issuance of any patent, and would run counter to the principles set forth by this Court in the case of *Brulotte v. Thys Co.* (1964), 379 U.S. 29, where extension of the monopoly was sought to be accomplished by agreement of the parties, and in the case of *Sears, Roebuck & Co. v. Stiffel Co.* (1964), 376 U.S. 225, and *Compco Corp. v. Day-Brite Lighting, Inc.* (1964), 376 U.S. 234, where such extension was sought to be accomplished by application of state law.

D. Applicability of Basic Criteria of Federal Patent Law in Enforcing a Patent Under a License Agreement.

Question Five of the Petition presents the broad basic issue as to whether a state court in enforcing a patent under a license agreement may ignore the basic criteria of federal patent law relating to procurement and interpretation of the scope of the patent which would be required to be applied in the enforcement of the patent in an infringement action.

As shown in Appendix O, Adkins has avoided discussion of the basic issue of Question Five by addressing himself, in his newly-formulated sixth and seventh questions, only to the validity of the California Supreme Court's conclusions with respect to certain specific aspects of Adkins' patent. Thus the Respondent's Brief ignores the court's unequivocal statement that it was "not concerned with defenses which might be available to Lear in the determination of questions of validity and infringement" (A, p. 46), as well as the court's refusal, consistently with its disregard of such defenses, to consider Lear's allegations of fraud on the Patent Office (footnote 35, A, p. 46.)

Respondent's Brief similarly fails to recognize the California Supreme Court's refusal to consider Lear's claim that Adkins improperly added new matter to his application. Early in its opinion, the court stated that whether or not new matter was added was not relevant on the issue of termination. (Footnote 19, A, p. 21.) Later in its opinion, when the court construed the scope of Adkins' patent, it stated that the patented apparatus fell within the scope of the initial application. (A, p. 34.) However, in construing the scope of the patent, the court relied heavily upon language (A, p. 32) which had been added to the specifications of the application by amendment [Ex. P, pp. 59-60] some four years after the application was filed, without giving any consideration to the question whether such language added new matter to the specifications. In effect, the court con-

strued the scope of the initial application to include everything in the specifications which appears in the printed patent, without considering whether the specifications had been enlarged to encompass subsequently-developed apparatus.

Furthermore, although in discussing his seventh question the Respondent (R. Br. p. 34) quotes the text of lip-service given by the California Supreme Court to the doctrine of file wrapper estoppel enunciated by this Court in the case of *Schriber-Schroth Co. v. Cleveland Trust Co.* (1940), 311 U.S. 211, he earlier admits that as to the claims which issued in Adkins' patent "the Court [the California Supreme Court] held . . . that the doctrine of file wrapper estoppel was inapplicable." (R. Br. p. 18.) The reason given by the court for not applying this doctrine was that the claims of the patent were new claims. (A, pp. 33, 34.) However, this is in direct derogation of the doctrine, since these claims were added to the application more than five years after it was filed and after numerous earlier claims had been rejected and abandoned.

It is obviously not within the proper scope of this Petition to challenge the validity of the state court's conclusions with respect to specific factors bearing on the validity or proper scope of Adkins' paten. On the other hand, we respectfully urge that it is necessary and proper to bring before this Court the general question whether the criteria of federal patent law which are relevant in an infringement suit may be ignored by

a state court in an action which seeks to enforce a patent under a license agreement.

Conclusion.

This case manifestly involves important federal questions not heretofore determined by this Court, on which guidance should be provided to both state and federal courts. In addition, the California Supreme Court has decided substantial federal questions in a manner inconsistent with applicable decisions of this Court.

Accordingly, we respectfully submit that Lear's Petition for a Writ of Certiorari should be granted.

Dated: May 13, 1968.

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APPENDIX O.

Comparison of Questions Presented in Petition and Revised Questions Presented in Respondent's Brief in Opposition.

A. General Limitations on the Application of Licensee Estoppel.

Questions in the Petition	*Respondent's Revised Questions*
1. Whether it is contrary to the purposes and provisions of the federal patent and antitrust laws for a licensee to be estopped from challenging the validity of the licensor's patent, particularly where the licensee has stood out from under the license agreement by notifying the licensor that he refuses to be bound by the agreement, and by asserting failure of consideration because of non-patentability of the invention and invalidity of the patent.	1. Whether the doctrine that a licensee is estopped to contest the validity of his licensor's patent, absent any misuse of the patent, is contrary to the Federal patent statutes. 3. Whether a licensee may always repudiate and stand out from under the license agreement and then contest the validity of the patent on the theory that if the patent is invalid the consideration for the license agreement fails.

2. Whether it is contrary to the purposes and provisions of the federal patent and antitrust laws for a licensee under an application for patent to be estopped from challenging the patentability of the claims before any patent issues or from challenging the validity of a patent which subsequently issues.

4. Whether the doctrine that a licensee is estopped to contest the validity of his licensor's patent is any different where the license is initially under a patent application and then shifts to a license under the claims of the issued patent.

B. Limitations on the Application of Licensee Estoppel Under a License Agreement Containing Provisions in Restraint of Trade.

Questions in the Petition

4. Whether it is contrary to the purposes and provisions of the federal patent and antitrust laws for a licensee to be estopped from challenging the validity of the licensor's patent where there is included in the license agreement, as interpreted by a state court, a provision which, in the absence of a valid patent, is in restraint of trade and unenforceable.

Respondent's Revised Questions

2. Whether the doctrine that a licensee is estopped to contest the validity of his licensor's patent is contrary to the Sherman Act where the license agreement provides that the licensee must pay royalties where he manufactures devices covered by the patent.

C. Restrictive Conditions in a License Agreement as a Patent Misuse.

Questions in the Petition	*Respondent's Revised Questions*
3. Whether it is a misuse of patent rights or an anti-trust violation to include in a license agreement, as interpreted by a state court, a provision which extends the monopoly of a patent by conditioning the right of the licensee to terminate the license, either before or after the patent issues, on the cessation of manufacture of the products purportedly covered by the license.	*Note: Although Respondent's revised fifth question does not involve any restrictive condition, it is shown below since it purports to restate Question Three in the Petition.* 5. Whether the license agreement violates either the patent laws or the Sherman Act by requiring the licensee to pay royalties during the pendency of the patent application.

D. Applicability of Basic Criteria of Federal Patent Law in Enforcing a Patent Under a License Agreement.

Questions in the Petition

5. Whether it is an unlawful extension of the patent monopoly and contrary to the purposes and provisions of the federal patent and antitrust laws for a state court, in enforcing a patent under a license agreement, to ignore those basic criteria of federal patent law relating to procurement of the patent and to the interpretation of its scope which are required to be applied in the enforcement of the patent.

Respondent's Revised Questions

Note: Although Respondents' sixth and seventh questions do not challenge the applicability of the basic criteria of federal patent law, they are shown below since they purport to be responsive to Question Five in the Petition.

6. Whether Adkins inserted any new matter in the specifications, and, if so, whether or not this constitutes fraud on the Patent Office precluding recovery, in a State court, of royalties due under a license agreement.

7. Whether the California Supreme Court, after properly stating the doctrine of file wrapper estoppel, correctly applied it to the facts in this case.

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IN THE

Supreme Court of the United States

October Term, 1968
No. 56

LEAR, INCORPORATED,

Petitioner,

vs.

JOHN S. ADKINS,

Respondent.

On Writ of Certiorari to the Supreme Court of California

BRIEF FOR PETITIONER

Opinions Below

The opinion of the California Supreme Court (A-I. 164)[1] is reported at 67 Cal. 2d 882, 156 U.S.P.Q. 258. A prior opinion had been rendered by the California District Court of Appeal (A-I. 121), which is reported at 244 A.C.A. 100, 151 U.S.P.Q. 119; and a modification of opinion was subsequently rendered by that court (A-I. 158), which is reported

[1]References herein are as follows: "Br. A., *infra* (page number)" refers to material annexed to this brief as an appendix pursuant to Rule 40-1(c); "A-I. (page number)" refers to pages in Volume I of the appendix filed pursuant to Rules 26 and 36; "A-II. (page number)" refers to pages in Volume II of

(This footnote is continued on the next page)

at 244 A.C.A. 563. Prior to the decision of the District Court of Appeal, the Superior Court in and for the County of Los Angeles had entered a judgment on the verdict in open court (A-I. 73), which is unreported; had entered rulings on motions for judgment notwithstanding the verdict and, in the alternative, for a new trial (A-I. 74), reported at 143 U.S.P.Q. 53; had entered a judgment for defendant notwithstanding the verdict (A-I. 84), which is unreported; and had entered an amendment to the judgment (A-I. 85), which is unreported.

Jurisdiction

The final judgment of the California Supreme Court was dated and entered on December 14, 1967 (A-I. 164). A timely petition for rehearing was denied on January 11, 1968 (A-I. 217). The petition for a writ of certiorari was filed on April 9, 1968 and was granted on May 20, 1968. The jurisdiction of this Court is invoked under 28 U.S.C., Section 1257 (3) (Br. A., *infra* 1).

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that appendix which, as permitted by Rules 36-7 and 39, are of different size and consist of all designated exhibits, including the patent involved in this case, the related proceedings before the Patent Office, and certain relevant patents that were admitted in evidence by the Superior Court of the State of California: "C.T. (page number)" refers to the Clerk's Transcript of the proceedings in the Superior Court of the State of California; "R.T. (page number)" refers to pages of the Reporter's Transcript of the proceedings in the Superior Court of the State of California; and "Ex. (exhibit number)" refers to exhibits admitted in evidence by the Superior Court of the State of California.

Constitutional and Statutory Provisions Involved

The case involves the purposes and provisions of the Constitution of the United States and the federal patent and antitrust laws of the United States. The Constitutional provision is Article I, Section 8, Clause 8 (Br. A., *infra* 1). Statutory provisions particularly involved are 35 U.S.C., Sections 101, 102(a), (b), 103, 115, 132, 154, 282 (Br. A., *infra* 2), 28 U.S.C., Section 1498 (Br. A., *infra* 6), and 15 U.S.C., Section 1 (Br. A., *infra* 7).

Questions Presented

1. Whether it is a misuse of patent rights or in contravention of the policy of the antitrust laws to include in a license agreement, as interpreted by a state court, a provision which extends the monopoly of a patent by conditioning the right of the licensee to terminate the license, either before or after the patent issues, on the cessation of manufacture of the products purportedly covered by the license.

2. Whether it is contrary to the purposes and provisions of the federal patent and antitrust laws for a licensee under an issued patent or a licensee under a pending patent application to be estopped from challenging the validity of the licensor's patent or the patentability of the claims of the licensor's application; and particularly whether such a licensee is so estopped:

(a) where the licensee has stood out from under the license agreement by notifying the licensor that he refuses to be bound by the agreement, and by asserting failure of consideration because of non-patentability of the invention and invalidity of the patent; or

(b) where the patentability of the claims of the application is challenged before any patent issues; or

(c) where there is included in the license agreement, as interpreted by a state court, a provision which, in the absence of a valid patent, is in restraint of trade and unenforceable.

3. Whether, in the absence of estoppel of the licensee, the record in this case establishes as a matter of law the unpatentability of the claims of the patent application and the invalidity of the patent which are here involved.

4. Whether it is an unlawful extension of the patent monopoly and contrary to the purposes and provisions of federal patent law for a state court, in enforcing a patent under a license agreement:

(a) to ignore basic criteria of federal patent law relating to patent procurement which would be applicable in any other proceeding for enforcement of the patent; and

(b) to ignore basic criteria of federal patent law relating to interpretation of the scope of the patent and infringement of the patent which would be applicable in any other proceeding for enforcement of the patent.

Statement of the Case

This case is an action for royalties under an agreement dated September 15, 1955, by which Adkins, the respondent, granted Lear Incorporated,[2] the petitioner, a

[2]Lear, Incorporated, named as defendant in the complaint filed below (C.T. B-1) on January 5, 1960, was, under a statutory merger, succeeded on June 5, 1962 by The Siegler Corporation and the name of the latter corporation was changed to Lear Siegler, Inc. at that time (C.T. 1126). "Lear" is used in this brief to refer to Lear, Incorporated and also to its successor, Lear Siegler, Inc.

license under a patent application which had been filed by Adkins (A-II. 1, Ex. 8, R.T. 296). The patent application was concerned with three features of a gyroscope ("gyro") (A-II. 29, Ex. P, R.T. 1328). Only one of these features is involved in this action—an apparatus for supporting bearings purportedly useful in any device having rotating elements (R.T. 1278; A-II. 23, Ex. 10, column 8, lines 31-34, R.T, 305).

By 1951 Lear had become a major manufacturer of navigation and guidance equipment for aircraft for military purposes. Gyroscopes are an essential component of such equipment.

Adkins, after employment for ten years by the United States Air Force in the procurement of navigation and guidance equipment (R.T. 2445-2446), left the Air Force in 1951 and, after several months, entered Lear's employment at its California facility. There as a full-time salaried employee, with the assistance of other Lear employees, he worked on the California Model 2156 gyro, and on February 15, 1954 he filed the patent application which is here involved (R.T. 297, 522, 2431, 2438).

Lear's manufacturing activities were carried on in two locations, one in California, and the other in Michigan, under separate management (R.T. 298, 578-579). During the development at Lear's California facility of the Model 2156 gyro, development work on another type of gyro was being conducted at Lear's Michigan facility (R.T. 1715-1726). Adkins did not participate in the development of the gyros of this latter type, known collectively as the Michigan[3] "steel gyros" (A-I.

[3]The terms "California" gyro and "Michigan" steel gyro were used throughout this litigation to distinguish the two products that

(This footnote is continued on the next page)

58-60, R.T. 550-552; R.T. 1710-1711; A-II. 117, Ex. Y, R.T. 1789).

The license agreement (A-II. 1, Ex. 8, R.T. 296), which was entered into on September 15, 1955, superseded a preliminary agreement made at the time of Adkins' employment. Both the California Model 2156 gyro and the Michigan steel gyros were being manufactured by Lear at the time when the license agreement was made (A-II. 16, Ex. 8, § 17; Ex. 35, First Sheet, R.T. 503). To the extent involved in this litigation,[4] the agreement granted Lear an exclusive license under the aforesaid patent application with respect to patentable claims that might be obtained by Adkins (A-II. 4, Ex. 8, § 2(a), R.T. 296). Royalties were initially paid on the California Model 2156 gyros and also on the Michigan steel gyros, both of which were then being manufactured (Ex. 35, R.T. 503).

At the time the license agreement was consummated, the bearing alignment portion of Adkins' patent application was primarily concerned with the method of assembly of gyros, both in the description of the invention and in the claims (A-II. 29, Ex. P, R.T. 1328). After operating under the license agreement for approximately two years, Lear for the first time, following a search and study of the prior art, found that the prior art was such as to make unpatentable the method of bearing alignment used in assembling the Michigan steel gyros, and that accordingly Adkins' patent application

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are involved. The license agreement refers to the MA-1 Compass Lear Model No. 5005, of which the California Model 2156 gyro was a component, and also refers to the Michigan steel gyros as Model Nos. 2152 and 2153 (A-11. 16, Ex. 8, §17, R.T. 296). Additional models of the Michigan steel gyros were subsequently developed by Lear.

[4]Of the Exhibits annexed to the license agreement, only Exhibit B (the above-mentioned patent application) is involved in this litigation.

did not disclose any invention utilized by Lear in that equipment. Lear thereupon on September 10, 1957 so notified Adkins, disclaimed any liability with respect to the Michigan steel gyros, and thereafter paid no further royalties on these gyros (A-II. 26, Ex. 36, R.T. 505).

Adkins terminated his employment on February 1, 1958 (R.T. 509), and consequently, in accordance with paragraph 11 of the agreement, the license became non-exclusive on August 16, 1958 (A-I. 158).

After its renouncement as to the Michigan steel gyros on September 10, 1957, Lear continued to account for royalties on the California Model 2156 gyros (Ex. 35, R.T. 503) until, on April 8, 1959, Lear served notice of termination of the license agreement (A-II. 27, Ex. 39, R.T. 510). Such notice expressly relied upon both Section 2(a) of the license agreement, which states that Lear has the right to terminate the agreement on ninety days' prior written notice, and Section 6 of the agreement, which states that Lear has the right to terminate the agreement in the event that the U. S. Patent Office refuses to issue a patent on the substantial claims of the application (A-II. 4, 11, Ex. 8, § 2(a), § 6, R.T. 296). After its notice of termination Lear no longer recognized the agreement as having any effect, claimed no rights under it and made no further royalty payments.

Prior to Lear's notice of termination on April 8, 1959, Adkins had amended the claims of his patent application several times in an endeavor to obtain allowance of claims of various types (A-II. 68, 77, 81, 90, Ex. P, 36, 45, 49, 58, R.T. 1328). In an amendment dated December 19, 1958, which was filed on December 22, 1958, Adkins amended the specification of the application to add additional matter to the description of

his apparatus (A-II. 90-92, Ex. P, 58-60, R.T. 1328). Nevertheless, on April 8, 1959, the date of Lear's notice of termination, none of the claims had been allowed by the Patent Office. Nearly a month after such notice and without Lear's knowledge Adkins again amended the application so as to present a new set of narrower claims (A-II. 96-100, Ex. P, 64-68, R.T. 1328). Thereafter, on January 5, 1960, the patent involved here (A-II. 18, Ex. 10, R.T. 305) issued as to certain of these claims.

On the date of issuance of the patent Adkins instituted suit in the Superior Court of California, asserting two causes of action. The first alleged breach of the license agreement and unjust enrichment after termination of the agreement. The second cause of action, which was dismissed by the Superior Court, had asserted liability under state law based on the alleged appropriation by Lear of the device described in Adkins' patent application and patent (A-I. 5, C.T. B-1). Lear's answer denied any breach of the license agreement, asserting that the agreement had been terminated by Lear's notice of April 8, 1959 and that Adkins had expressly released Lear from any obligations other than those set forth in the license agreement. It also asserted that Adkins' patent application and the patent which ultimately issued did not disclose a patentable invention, and that accordingly there was a failure of consideration with respect to all causes of action (A-I. 36, 46, C.T. 1497, C.T. 1655-Fifth Defense; R.T. 2057, 2317).

During the trial the Superior Court ruled that Lear by its notice of April 8, 1959 had terminated the license agreement, and the court so instructed the jury (R.T. 3080). The jury returned a verdict for Adkins

of $16,351[5] as to the California 2156 gyros and $888,-122[6] as to the Michigan steel gyros, as royalties under the agreement and damages after termination of the agreement, and the court entered a judgment on that verdict[7] (A-I. 73). However, the court subsequently, on Lear's motion, entered a judgment notwithstanding the verdict in favor of Lear as to the Michigan steel gyros (A-I. 84).

The Superior Court held that, despite Lear's full termination of the license agreement by its notice of April 8, 1959, it was, with respect to the California 2156 gyros, estopped to deny the validity of the patent, and determined that Lear was liable to Adkins in the amount of the jury verdict of $16,351 for royalties with respect to those gyros on the theory of unjust enrichment, even after the termination of the license agreement on April 8, 1959. However, the court determined that Lear had no liability with respect to the Michigan steel gyros, holding that, in view of Lear's independent development of them, it was not estopped to challenge the validity of the patent which issued to Adkins on January 5, 1960; that Adkins' patent was invalid; and that the Michigan steel gyros did not infringe any claims of the patent, even if valid (A-I. 74).

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[5]The jury verdict with respect to the California 2156 gyros is based almost entirely upon asserted damages under state law on the basis of unjust enrichment from April 8, 1959 to May 31, 1963, the cut-off date which the parties stipulated for the determination of the amount, if any, recoverable under the complaint.

[6]The jury verdict with respect to the Michigan steel gyros is based upon royalties from January 1, 1955 to April 8, 1959 and upon asserted damages under state law on the basis of unjust enrichment from April 8, 1959 to the cut-off date of May 31, 1963.

[7]Lear paid royalties on the California 2156 gyros up to the notice of termination on April 8, 1959 in the amount of $30,735 (R.T. 771). Lear has not sought to recover any of these royalties.

During the pendency of this action in the Superior Court, Lear on March 1, 1963 instituted an action in the United States District Court for the Central District of California, No. 63-241, seeking a declaratory judgment of invalidity, unenforceability and non-infringement of Adkins' patent. This action in the federal court was stayed on the ground that the same issues were pending in the state court action. *Lear Siegler, Inc. v. Adkins* (9th Cir. 1964), 330 F.2d 595.

On appeal from the judgment of the Superior Court, the California District Court of Appeal remanded the case for a new trial to determine the damages incurred by Adkins only up to termination of the license agreement on April 8, 1959. It held that the validity of Adkins' patent was not in issue, in view of the fact that the patent had not issued on the claims of the application described in the license agreement but rather on new claims filed after termination of the agreement which were not part of the subject matter of the agreement; that Lear was not estopped to challenge the claims of the patent application upon which the agreement was based because those claims had been held unpatentable by the Patent Office; and that in any event Lear was not estopped to challenge the validity of the patent, in view of Lear's notice of termination in April 1959 and Lear's refusal to be bound by the agreement thereafter (A-I. 137-141).

Despite the rulings and decisions of the two courts below, the California Supreme Court, at Adkins' insistence, construed the license agreement to provide that Lear could exercise its right to terminate the agreement pursuant to the ninety-day notice provision of Section 2(a) only upon cessation of manufacture of the products purportedly covered by the license (A-I.

187-188), and concluded that, since Lear had not ceased such manufacturing, Lear's notice of termination of April 8, 1959 was ineffective and the agreement was still in full force (A-I. 191). That court also held that Lear was estopped from contesting the validity of Adkins' patent for any purpose (A-I. 191), despite the Superior Court's holding that the patent was invalid as a matter of law (A-I. 79).

Furthermore, the California Supreme Court construed Adkins' patent to cover the Michigan steel gyros, even though the Superior Court had ruled to the contrary (A-I. 191-203).

In view of its construction of the license agreement and Adkins' patent, the California Supreme Court reinstated the initial judgment which had been entered by the Superior Court on the jury verdict in the amount of $16,351 as to the California 2156 gyros, and in the amount of $888,122 as to the Michigan steel gyros. The California Supreme Court thus reversed the judgment notwithstanding the verdict which had been entered by the Superior Court in favor of Lear as to the Michigan steel gyros. That court also reversed the order of the Superior Court which, in the alternative, had granted Lear's motion for a new trial.

The California Supreme Court's decision, if permitted to stand, would make Lear accountable to Adkins, not only for the full amount of the jury verdict, but also for royalties as to both types of gyros and any similar gyros developed in the future, from May 31, 1963 (the cut-off date stipulated in the trial) until the expiration of Adkins' patent in 1977, and to an even later date if any patents should be issued to Adkins for different but related inventions (A-I. 181).

Summary of Argument

I

The license agreement and Adkins' patent are unenforceable because of patent misuse and the contravention by the agreement of antitrust policy. These issues of Question One stem from the fact that the court below read into the license agreement an implied condition precedent which required that termination of the agreement by Lear be accompanied by its cessation of manufacture of products purportedly covered by the license.

The patent laws provide no non-contractual basis for requiring or implying such a cessation-of-manufacture condition on Lear's termination rights as licensee, particularly since at the time when Lear gave notice of termination no patent had issued to Adkins and he had no vested rights.

On the other hand, any contractual requirement for such cessation of manufacture does not comport with the Constitutional objectives of the patent laws, and the restraint of trade thereby imposed is condemned by the policy of free competition reflected in the Sherman Act.

The products affected by any such cessation of manufacture were destined primarily for use in military equipment, and 28 U.S.C., Section 1498 (Br. A., *infra* 6) would limit proceedings against the Government based on any alleged patent infringement by those products to an action for damages in the Court of Claims. It is contrary to the policy of that Section to subject a manufacturer of such equipment to the contractual alternatives of cessation of manufacture or payment of royalties, regardless of patent validity.

Finally, since the license was granted under a pending application, any requirement of cessation of manufacture before issuance of the patent is a patent misuse involving an extension of the patent monopoly similar to that condemned by the Court in *Brulotte v. Thys Co.* (1964), 379 U.S. 29, and results in the unenforceability of the license agreement and the related patent.

To combine the court-implied condition against cessation of manufacture with a court-imposed disability to challenge patent validity is tantamount to an express agreement not to contest validity, which this Court has condemned in *Katzinger v. Chicago Metallic Mfg. Co.* (1947), 329 U.S. 394; and the proscribed condition of termination constitutes, both before and after the patent issues, such a patent misuse and such a contravention of antitrust policy as to make unenforceable both the license agreement and the patent, in the state as well as the federal courts.

II

A consideration of the issues raised in Question Two demonstrates the error of the court below in holding that Lear, as licensee, was estopped to challenge the patentability of the claims of Adkins' patent application or the validity of Adkins 'patent.

A. General equitable principles provide no sound basis for licensee estoppel since there is lacking an essential element of such estoppel, namely misrepresentation or concealment on the part of the licensee which has misled the licensor. Estoppel by deed provides no valid analogy, for it at most prohibits the *patentee-licensor* from "derogating from" his patent, as against his *licensee*. The doctrine of landlord-tenant estoppel, under which a tenant is precluded from denying his landlord's title, provides no valid analogy since the tenant

in possession has what he bargained for. On the other hand, the licensee under an invalid patent lacks the essential intangible statutory right which he bargained for. His assumed privileges under the license, which in fact can be enjoyed by any other member of the public with impunity, are completely illusory.

B. Apart from the lack of any general equitable basis for estoppel of a patent licensee, such estoppel is contrary to the purposes and provisions of the federal patent and antitrust laws. The patent system represents a departure from the requirement of freedom of competition implicit in the common law and explicit in the federal antitrust laws. Hence the public interest dictates that invalid patents be revealed, particularly in view of the *ex parte* nature of Patent Office proceedings and the "notorious difference" between the standards of patentability applied by the Patent Office and by the courts. A licensee is often the person best qualified to promote such public interest by showing such invalidity.

Although this Court in certain early cases indicated a possible receptivity to the rule of licensee estoppel, analysis of those cases reveals that in none of them did the decision of the Court depend upon the adoption of the rule. Furthermore, in recent cases, where the validity of a patent has been a crucial element in sustaining the validity of the license agreement itself, the Court with one exception has refused to estop the licensee from challenging such validity. *Sola Electric Company v. Jefferson Electric Company* (1942), 317 U.S. 173; *Katzinger v. Chicago Metallic Mfg. Co.* (1947), *supra.* Cf. *Automatic Radio Manufacturing Co. v. Hazeltine Research, Inc.* (1950), 339 U.S. 827. Furthermore, in *Scott Paper Co. v. Marcalus Mfg. Co.*

(1945), 326 U.S. 249, the Court, in sustaining a patent assignor's defense against an infringement claim by his assignee on the ground that an expired patent had anticipated the assigned patent, held that "no more than private contract can estoppel be the means of successfully avoiding the requirements of legislation enacted for the protection of a public interest."

C. Apart from the logic and impelling public policy which call for the Court's unequivocal condemnation of the rule of licensee estoppel, the estoppel of Lear by the court below is particularly unwarranted on three further grounds:

(a) Lear, as licensee, by notice to its licensor, renounced the license agreement and asserted failure of consideration by reason of non-patentability of the purported invention and invalidity of the patent. Such renouncement exposed Lear as licensee, at the election of its licensor, to the alternative remedies of enforcement by Adkins of the license agreement or suit against Lear for infringement. There is no sound basis for the estoppel of a licensee who, claiming no rights under the license as against his licensor or the world, provides his licensor with such alternatives.

(b) The license to Lear was granted under a patent application, and the patentability of the claims of the application was challenged by the renouncement by Lear, as licensee, prior to the issuance of any patent under the application. Many years ago the opinion of Chief Justice Taft, writing for a unanimous court in *Westinghouse Electric & Mfg. Co. v. Formica Insulation Company* (1924), 266 U.S. 342, pointed out the potential enlargement of the claims of an application where an assignment of the ap-

plication is made before any patent issues, and suggested that any estoppel of the assignor should be more limited in such a situation than in the case of the assignment of an issued patent. Estoppel of a licensee under a patent application is particularly objectionable where, as here, the description of the invention was altered and new claims were added to the application after renouncement by the licensee.

(c) The license agreement, as interpreted by the court below, embodies a condition which requires that the licensee cease manufacture in order to exercise its rights of termination. As pointed out under Part I of this Summary and in Section I of the Argument, such a condition, absent a valid patent, constitutes such a restraint of trade as to provide ample legal basis for determining that the entire license agreement is unenforceable. However, even if this Court should hold that such a provision does not render the entire agreement unenforceable, a valid patent is necessary to "rescue" the agreement "from the jaws of the antitrust laws". Any application of the rule of estoppel under such a license agreement, by foreclosing inquiry as to whether there is the patent validity which is requisite to sustain the legality of the agreement itself, would undermine the basic objectives of the federal patent and antitrust laws.

III

The public importance of resolving questions of patentability of claims and patent validity, and the Constitutional standard of patentability that must be applied, make it desirable for this Court to review the issues of Question Three, since they can be resolved as a matter of law.

The structure for supporting bearings which constitutes the apparatus involved in the patent issued to Adkins is a combination of old mechanical elements of very simple nature. On the basis of prior art patents, which were admitted in evidence and are in the record, the Superior Court determined, as a matter of law, that the claims of the application were unpatentable and that the patent was invalid. Since the California Supreme Court subsequently ruled that Lear was estopped to challenge patentability or validity, it did not pass on this determination of the lower court.

The purported invention is directly anticipated by prior art, and would be obvious to one skilled in that art. The prior art patents which are in the record provide ample basis for a determination by this Court that, as a matter of law, the claims of Adkins' application, and the patent which ultimately issued, fail to meet the Constitutional standard required for patentability and validity.

IV

A determination by the Court that, as urged by petitioner in Section I of the Argument, the license agreement and patent were unenforceable because of patent misuse would finally dispose of this case. Such a final disposition would also result from a determination, as urged by petitioner in Sections II and III of the Argument, that Lear was entitled to challenge the validity of Adkins' patent and that the claims of Adkins' application were unpatentable and that his patent was invalid. Hence our Argument on the issues raised by Question Four of the Questions Presented, which is here summarized, is significant only if neither of the above-mentioned determinations is made by the Court. The issues which in that event will call for the Court's consideration stem from the failure of the court below

to apply basic criteria of federal patent law applicable to (A) the procurement of Adkins' patent, and (B) the determination of the scope of the claimed invention and whether the claims of the patent were infringed by Lear's Michigan steel gyros.

A. With respect to the criteria applicable to the procurement of Adkins' patent, the record shows certain specified improprieties in the proceedings before the Patent Office which, under 35 U.S.C., Sections 102, 115, 132, and 282, were such as to render Adkins' patent unenforceable, regardless of its validity. However, the trial court and the California Supreme Court refused to consider such improprieties, thereby committing error which was substantially prejudicial to Lear. The principal improprieties asserted by Lear and ignored by the courts below, were:

(1) The addition, by amendment in 1958, of "new matter" to the description of the apparatus contained in the specification of the original patent application;

(2) The reliance by Adkins upon such "new matter" in obtaining the allowance by the Patent Office of the claims of the application;

(3) The addition by Adkins of such "new matter", despite his knowledge that products incorporating it had been previously sold for more than one year; and

(4) The conscious concealment by Adkins of the fact that amendments to the application included "new matter", when later filing oaths in the Patent Office.

These improprieties were clearly of such a nature as to make unenforceable the patent which issued to Ad-

kins, regardless of its validity; and the refusal of the court below to consider whether such improprieties had occurred or to recognize the defenses thereby afforded Lear was prejudicial error, contrary to the federal patent laws, and constitutes a perversion of the requisite uniformity of those laws.

The court below was of the opinion that it need not be concerned with how the patent was procured because it was concerned only with enforcement of the license agreement, regardless of the nature of the proceedings before the Patent Office. That court has thereby enlarged patent rights under guise of state law by refusing to consider defenses that would be available in enforcing the patent, apart from any license agreement.

B. The resolution of the question whether the claims of Adkins' patent were infringed by Lear's Michigan steel gyros involves, first, a determination as to the scope of the claimed invention and, second, a determination whether the scope of that invention is such as to cover those gyros.

(1) The court below, although purporting to consider them, ignored or incorrectly applied four criteria of federal patent law which were basic in determining the scope of Adkins' claimed invention.

(a) The court below went beyond the claims of the application, and construed the invention to cover things described in the specification, but not claimed. The invention, as defined by the court, utilized a pair of bearing cups which are positioned with use of a mandrel into oppositely placed receiving holes in a frame or gimbal (A-I. 172). Although the use of a mandrel is described in Adkins' specification, such use is not

claimed in the patent, because claims as to this feature were expressly denied to Adkins by the Patent Office in view of a prior art patent.

The court below also went beyond the claims of the patent, when construed in the light of what is actually described in the specification. The apparatus shown and described by Adkins' original specification requires cooperation between mating surfaces which have a particular configuration and which are in contact with one another. No such limitation was recognized by the court below in construing the claims of the patent, but rather the court construed the claims to encompass confronting surfaces of any configuration.

(b) The court below also erroneously further broadened the scope of Adkins' claimed invention by ignoring the file history of the application. Numerous claims directed to the method of assembly employing a jig or rod had been rejected by the Patent Office prior to issuance of the patent, and a definition in such claims which had provided for "receiving holes" had been denied. Nevertheless, the court ruled that the scope of Adkins' claimed invention included the use of a mandrel or rod for alignment, and that "receiving holes" were part of that invention. The court thereby ignored the rejection by the Patent Office of claims incorporating such features. In thus construing the scope of Adkins' patent, the court ignored an essential criterion of federal patent law which requires that the claims of the patent be read in the light of the file history of the application.

(c) As shown under Subdivision A of this Part IV, the court below, in refusing to consider the availability to Lear of the defense based on the addition of "new matter" by amendment, committed prejudicial error in contravention of established criteria in patent enforcement. However, the court compounded its error by not merely ignoring the defense against enforceability provided by the addition of the "new matter", but by also relying upon this "new matter" in determining the scope of Adkins' claimed invention.

(d) The court below construed the invention to encompass all similar apparatus for achieving the same results unless such apparatus is "expressly excluded by specific language". This is a rule of construction which has not heretofore received judicial recognition. Furthermore it runs counter to established criteria that (i) the specification can be used to limit but never to expand the claims, and (ii) the claims cannot be construed so broadly as to read on the prior art and thereby cover things that are in the public domain.

The court below also applied the doctrine of equivalents beyond any limits heretofore recognized, by failing to ascertain whether the doctrine as so applied runs counter to the aforesaid established criteria.

(2) The court below erred in refusing to apply basic criteria of federal patent law in determining whether the scope of Adkins' claimed invention, when properly construed, covered Lear's Michigan steel gyros.

When the claims are construed in accordance with such criteria, as employed by the Superior Court, the

claimed invention must be limited to a structure for supporting bearings wherein the elements have mating surfaces of specific contour which cooperate when engaged to provide orientation or angular movement in any direction so as to permit alignment. This is essentially limited to a ball-and-socket structure. The claimed invention cannot cover the Michigan steel gyros because they achieve alignment simply by positioning the elements in oversize holes and no angular movement for alignment is possible.

The question of coverage of Adkins' claims with respect to the Michigan steel gyros is a question of law, since no dispute exists as to the structure of Lear's Michigan steel gyros. The only question that must be resolved is the scope of Adkins' claimed invention, which is itself a question of law.

Argument.

I

THE LICENSE AGREEMENT, AS CONSTRUED BY THE CALIFORNIA SUPREME COURT, EMBODIES A MISUSE OF PATENT RIGHTS AND CONTRAVENES THE POLICY OF THE ANTITRUST LAWS, AND THE AGREEMENT AND PATENT ARE THEREFORE UNENFORCEABLE.

The issues of Question One relating to patent misuse and contravention of the policy of the antitrust laws stem from the construction given by the California Supreme Court to Section 2(a) of the license agreement. That Section provides:

> "... Lear shall have the right on ninety days' prior written notice to Adkins, to terminate any one or more of the licenses herein granted." (A-II. 4, Ex. 8, §2(a), R.T. 296).

Although Lear gave notice of termination under this Section on April 8, 1959, the California Supreme Court held that such notice was ineffective because Lear had not ceased to manufacture products purportedly covered by the agreement—an implied condition precedent read into the agreement by that court.

Since the construction of a contract is a matter of state law, we have assumed that, in accordance with Section 1257(3) of the Judicial Code (28 U.S.C.) (Br. A, *infra* 1) and the decisions of this Court thereunder,[8] this Court would not deem it appropriate to review the interpretation given by the California Supreme Court, over Lear's objection, to the license agree-

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[8] E.g., *Brinkerhoff-Faris Trust & Savings Company v. Walter O. Hill* (1930), 281 U.S. 673.

ment. We recognize, of course, that if, despite Section 1257(3), this Court were to interpret Section 2(a) of the agreement in accordance with the construction urged by Lear and adopted by the two lower courts, no patent misuse or antitrust violation would be involved. In that event, however, Lear's notice of termination of April 8, 1959 would have been fully effective, and there would be no basis for any liability whatsoever of Lear thereunder after the lapse of ninety days, regardless of the validity or scope of Adkins' patent.

The patent laws provide no support for a requirement that, in order to terminate the license agreement, Lear cease the manufacture of products purportedly covered by Adkins' application and the license agreement. "Until the patent is issued there is no property right in it [the invention], that is, no such right as the inventor can enforce." *Marsh v. Nichols, Shepard and Company* (1888), 128 U.S. 605, 612. Accordingly, since no patent issued to Adkins until 1960, about nine months after Lear's notice of termination, he had no vested rights prior to that time.

Furthermore, the license agreement expressly based the rights and obligations of the parties on Adkins' assumed patent rights—*i.e.*, on those claims "which have been patented or will be patentable by Adkins" (A-II. 4, Ex. 8, § 2(a), R.T. 296); the scope of Adkins' claims was changed several times while the application was pending; the claims were repeatedly rejected by the Patent Office; and the patent which ultimately issued was based on claims added by amendment after Lear's notice of termination. Indeed, at the time of such notice, it was not at all certain that any patent would ever issue on Adkins' application, since, on the average, only about

one patent issues for each two applications. *Dynamics of the Patent System,* William B. Ball (1960), p. 14.

Hence the patent laws provide no non-contractual legal basis for requiring or implying a cessation-of-manufacture condition on the termination rights granted Lear as licensee.

On the other hand, it is clear that a contractual requirement that Lear, or any other manufacturer, cease the manufacture of products in which it is engaged does not comport with the Constitutional objectives of the patent laws. The objectives of those laws, as set forth in the Constitution of the United States (Article I, Section 8, Clause 8), are "to promote the progress of science and useful arts by securing for limited times to . . . inventors the exclusive right to their . . . discoveries". That standard should be controlling in the enforcement of patent rights, whether asserted under a license agreement or in an infringement action.

An agreement which requires Lear to cease manufacturing products purportedly covered by the claims of a pending patent application does not "promote the progress of science and useful arts", and is therefore inconsistent with the Constitutional objectives. Furthermore, such a requirement is a restraint of trade which can be supported only if consistent with the public policy of free competition reflected in the Sherman Act. *Apex Hosiery Co. v. Leader* (1940), 310 U.S. 469.

The freedom of competition required by the Sherman Act, and particularly by 15 U.S.C., Section 1 (Br. A., *infra* 7), clearly calls for the condemnation of any agreement containing a contractual requirement to terminate manufacture, except possibly to the extent that it is

based upon the patent of a licensor where the validity of the patent has already been clearly established. The basic element of patent validity which is essential in order to save any such agreement from unenforceable status of a contract in violation of the Sherman Act cannot be assumed by agreement of the parties. By the same token, it is clearly contrary to the limitations of public policy governing the patent monopoly, to impose such a condition on a right of termination purportedly granted to the licensee under a license agreement.

There is an additional element of public policy here present. The products which Adkins has asserted to be covered by his patent were manufactured by Lear primarily for use in military equipment;[9] and 28 U.S.C., Section 1498 (Br. A., *infra* 1), requires that claims for patent infringement be made against the Government in the Court of Claims for damages only, thereby precluding any legal action that would impede the manufacture of essential military equipment. It is clearly contrary to the policy thus embodied in 28 U.S.C., Section 1498 to include in any contract with Lear a provision which would require that it cease the manufacture of essential military equipment or, as the sole alternative, pay royalties under what may be, and

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[9]Sales of the California 2156 gyros and the Michigan steel gyros were primarily to the Government for military equipment. The 2156 gyros which Adkins worked on were for the MA-1 compass system (R.T. 312-313) which was used in aircraft of the United States Navy (Ex. 33, p. 2; R.T. 322). The steel gyros were used in compass systems and in bombing systems for military aircraft (R.T. 1950-1960). The trial judge reviewed all of the sales information concerning both types of gyros and stated in his opinion that "Neither device was put on the public market"—i.e., all were sold to the Government (A-I. 75).

in this case has been determined by a lower court to be, an invalid patent. If the license agreement, as construed by the state court, is enforced, the parties would be permitted to do by agreement what is prohibited by 28 U.S.C., Section 1498. An agreement cannot be used as a shield to contravene the public policy expressed in an act of Congress. *Sola Electric Company v. Jefferson Electric Company* (1942), *supra.*

Furthermore, the license agreement in this case relied merely upon a pending patent application. Yet it is only after issuance of a patent which is valid that the patentee has "the right to exclude others from making, using or selling the invention. . . ." 35 U.S.C., Section 154 (Br. A., *infra* 4). Accordingly, any requirement that Lear cease manufacturing products before it can terminate the license agreement would seek to assert patent rights not yet established, and would attempt to enforce a patent monopoly not yet in existence.

In *Brulotte v. Thys Co.* (1964), *supra,* this Court found it to be unlawful *per se* to enforce the payment of royalties beyond the expiration date of the patent. In that case the Court severely condemned any use of the leverage which a patent affords as a means of exacting such an agreement. If the Court were to uphold the validity of license agreements containing a termination provision corresponding to that held by the court below to be present here, patent applications could readily be made the basis of a control by licensors of product-manufacture which would constitute an extension of the patent monopoly at least as flagrant as that condemned in *Brulotte v. Thys Co.* (1964), *supra.* There, the court was concerned only with the continued payment of royalties beyond the life of a valid patent.

Here, there is involved a restraint on the process of manufacture itself, not only prior to the issuance of a patent but possibly even in the absence of the ultimate issuance of any patent whatsoever.

When patent rights are sought to be extended by agreement beyond their legitimate scope, there is such a misuse of the statutory patent monopoly that this Court has held the agreements and the related patents unenforceable, whatever the legal device employed. *Scott Paper Co. v. Marcalus Mfg. Co.* (1945), *supra, Mercoid Corp. v. Mid-Continent Investment Co.* (1944), 320 U.S. 661; *Morton Salt Company v. G.S. Suppiger Company* (1942), 314 U.S. 488.

Contractual arrangements which have heretofore been held to constitute misuses of patent rights include, in addition to the misuse in *Brulotte v. Thys Co.* (1964), *supra,* attempts to cover unpatented devices, *Mercoid Corp. v. Mid-Continent Investment Co.* (1944), *supra;* attempts to control the use of a product or its selling price after loss of control over the product by the patentee, *United States v. Univis Lens Company* (1942), 316 U.S. 241; attempts to collect royalties on a package of patents, without diminution of royalties, until expiration of the last patent to expire, *American Securit Company v. Shatterproof Glass Corp.* (3rd Cir. 1959), 268 F.2d 769; and attempts by agreement to suppress the manufacture of possibly competing products, *National Lockwasher Co. v. Garrett* (3rd Cir. 1943), 137 F.2d 255 and *McCullough v. Kammerer Corporation* (9th Cir. 1948), 166 F.2d 759.

The patent misuse which was brought about by the decision of the court below is as objectionable after issuance of the patent as it was prior to such issuance.

To imply in the license agreement a condition under which Lear must cease manufacturing in order to terminate the agreement, and at the same time to hold that Lear may not contest validity, as the court below has done, deprives Lear of the defense of invalidity which is provided by the patent laws once the patent actually issues. 35 U.S.C., Section 282 (Br. A., *infra* 5). If Lear continues the manufacture of its products, the opinion below precludes it from challenging the validity of the patent. On the other hand, if Lear ceases such manufacture, it no longer has a basis for such challenge. Yet this Court has held that an express agreement not to contest the validity of a patent is in conflict with Congressional policy. *Katzinger v. Chicago Metallic Mfg. Co.* (1947), *supra* at 402.

Any requirement implied in the license agreement which makes it necessary for Lear, in order to terminate the agreement, to cease the manufacture of products purportedly covered by the claims of Adkins' application or patent, improperly extends any patent rights of Adkins, both before and after the issuance of any patent to him. Such a requirement, brought about by the construction given to the agreement as a matter of state law by the court below, renders both the agreement and the patent unenforceable.[10] The achievement of uniform federal standards makes it mandatory that there be struck down any such application of state law that clashes with the purposes and provisions of the federal patent and antitrust laws. *Sears, Roebuck & Co. v. Stiffel Co.* (1964), 376 U.S. 225.

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[10]This misuse is made even more onerous by the construction of the agreement by the state court to "cover not only patented or patentable claims disclosed or intended to be disclosed by

(This footnote is continued on the next page)

II

THE COURT BELOW WAS IN ERROR IN HOLDING THAT LEAR, AS LICENSEE, WAS ESTOPPED TO CHALLENGE THE PATENTABILITY OF THE CLAIMS OF ADKINS' PATENT APPLICATION OR THE VALIDITY OF ADKINS' PATENT.

The issues raised by Question Two of the Questions Presented relate to Lear's right to challenge the patentability of the claims of Adkins' patent application and the validity of Adkins' patent which ultimately issued.

The California Supreme Court held that, unless there was a termination of the license agreement in accordance with its terms (including the condition of termination implied by the California Supreme Court), Lear "under the doctrine of licensee estoppel" was prohibited from challenging the validity of Adkins' patent (A-I. 179). Such holding was made, without analysis, merely in reliance on certain textwriters and on a 1932 decision of a Michigan state court. The court also appeared to take the view that any licensee under a patent or under a patent application is always so estopped.

Certain decisions of this Court and of other courts may from time to time have lent some support to the doctrine of licensee estoppel under special circumstances. However, as shown below, reasoned analysis not only demonstrates that general legal principles provide no sound basis for such a doctrine as a matter of general law. It also makes clear that to permit the

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the application attached as Exhibit B to the agreement but also such claims in other applications filed for different but related inventions revealed by the exhibit." (A-I. 181). Thus the restrictive conditions imposed by the agreement extend beyond the patent in suit and encompass future patent applications that could extend the monopoly indefinitely into the future.

rule of licensee estoppel to become a doctrine of general application in the state or federal courts would run squarely counter to the fundamental purposes and policies of the federal patent and antitrust laws. As will be pointed out subsequently in this Section, certain facts here present also make particularly objectionable in this case the application of any rule of estoppel.

A. General Legal Principles Provide No Sound Basis for Estoppel of the Licensee Under a Patent or a Pending Patent Application.

As a matter of general law, the essential elements of equitable estoppel are lacking in the granting of a license by the holder of a patent. Such equitable estoppel presupposes misrepresentation or concealment on the part of the person estopped, which has misled the other party as to a matter of substance. Bigelow, *Estoppel* (6th ed.) 604. That doctrine, as stated by this Court, "always presupposes error on one side and fault or fraud upon the other . . .": *Morgan v. Chicago and Alton Railroad Co.* (1878), 96 U.S. 716, 720.

This Court has suggested in *Westinghouse Electric & Mfg. Co. v. Formica Insulation Company* (1924), *supra,* that there is some analogy between estoppel in the conveyance of land and estoppel in the assignment of a patent, so that "fair dealing should prevent him [the assignor] from derogating from the title he has assigned, just as it estops a grantor of a deed of land from impeaching the effect of his solemn act as against his grantee."[11] However, even if the analogy of

[11]The significance of the opinion expressed by the Court, even as to the assignor of a patent, is dubious in view of the Court's subsequent decision, discussed at p. 41 below, in *Scott Paper Co. v. Marcalus Mfg. Co.* (1945), *supra.*

estoppel by deed is a valid one, it would at most provide a basis for prohibiting the *patentee-licensor* from "derogating from" his patent, as against his licensee. The assignor or licensor receives a monetary consideration which is clearly based on his representation, explicit or implicit, that he has made an invention as to which he has valid rights under the patent laws. The assignee or licensee, on the other hand, makes no such representation. He agrees merely to make payments for a privilege which he assumes can be granted only by the assignor or licensor.

A further analogy which has at times been urged as a basis for estoppel of a patent licensee, is the doctrine under which a tenant is estopped to deny his landlord's title. But it is possession of premises which provides the basis for estoppel of a tenant to deny his landlord's title. Bigelow, *Estoppel* (6th ed.) 550. The tenant in possession of real property enjoys something tangible that is known to exist; it is exactly what he bargained for. On the other hand, the licensee under an issued patent enjoys only an intangible statutory right which can be denied by others, and which as a matter of law may not even exist. If the patent is not valid, the licensee, absent the license agreement, would be free to manufacture or use the unpatentable invention. To preclude the licensee from questioning the validity of the licensor's patent is therefore to prohibit action on his part which any other member of the general public is free to take.

Hence it is not surprising that the courts early recognized that the position of the tenant and the licensee are not comparable. In *Saxton v. Dodge* (1870), 57 Barb. (N.Y. Sup.Ct.) 84, 113, the court, in refusing to

extend to the licensee of a patent the rule of estoppel of a tenant, said:

> "It is not like the case of a landlord and tenant, where the latter gets possession of premises, and has benefit of the use and occupation, and the rents and profits. Here the defendants received nothing visible or tangible. They obtained only a pretended exclusive privilege, which the licensors did not own or possess, and could bestow on no one."

As previously noted, the court below appeared to take the view that, even though the rule of estoppel should probably always be invoked as against a patent-licensee, the rule was in any event applicable where a license agreement specifically grants a right of termination to the licensee. But any such purported limitation in the application of the estoppel rule is meaningless where the licensor expressly, or (as here) by a judicial construction of the license agreement, conditions the licensee's right of termination upon his cessation of manufacture. For if such a condition is enforced and at the same time the licensee is estopped to challenge an invalid patent, he is in substance in the same position as he would have been without any such condition concerning termination. It is only the licensee who, even in the absence of patent validity, must pay royalties or cease manufacture. Any other person is subject to such alternatives only if patent validity is established.

The courts have traditionally fashioned the doctrine of estoppel in order to adjust the equities of particular situations. But no equities prompt the estoppel of a patent licensee. If the point is made that, on the faith of the license, the licensor has refrained from initiating an infringement action, the answer is that, as recognized

by this Court in *St. Paul Plow Works v. Starling* (1891), 140 U.S. 184, he is free to initiate such an action or sue for royalties whenever the licensee raises the issue of patent validity and refuses to make further royalty payments.[12] After such a refusal the licensee takes no benefit from the license; the licensor has received full compensation for past forbearance from suit through the royalty payments made prior to the licensee's raising the issue of patent validity; and if the patent is in fact valid, the licensor will at his option be entitled to compensation for further infringement of his patent or, in the absence of an express right of termination, to the specified royalties.

B. It Is Contrary to the Purposes and Provisions of the Federal Patent and Antitrust Laws to Estop a Licensee From Challenging the Validity of His Licensor's Patent or the Patentability of the Claims of His Licensor's Patent Application.

Apart from the lack of any equitable basis, as between the parties, for estoppel of the licensee of a patent, the public interest clearly requires that the validity of a patent be open for test in the courts when challenged by the licensee or any other party of undoubted legal standing, regardless of the particular business relationship or any local rules of equity. For "it is the

[12]In *St. Paul Plow Works,* discussed at p. 38 below, the Court said: "We are of opinion that the license, in the absence of a stipulation providing for its revocation, was not revocable by the defendant, except by mutual consent or by the fault of the other party. If the plaintiff, after receiving the notice [renouncing the license], had sued the defendant for infringement, he would have been properly regarded as acquiescing in the renunciation; but instead of that, he elected to regard the license as still in force, and brought an action to recover the royalties provided for by it, which he was entitled to do."

public interest which is dominant in the patent system." *Mercoid Corporation v. Mid-Continent Investment Co.* (1944), *supra.* And any rule of estoppel which would preclude the challenge of patent validity is clearly a matter of federal law, and not of state law. *Katzinger v. Chicago Metallic Mfg. Co.* (1947), *supra.*

Insofar as it provides a monopoly as an incentive to invention, the patent system represents a departure from the requirements of freedom of competition implicit in the common law and explicit in the federal antitrust laws. This policy of free competition will be contravened if, as the result of estoppel by contract, the validity of a monopoly asserted under an issued patent is to be screened from judical scrutiny at the instance of those members of the public who are best able to make the challenge.

The patentability of an invention is resolved in the first instance by the Patent Office in *ex parte* proceedings, in which patentability is a question of law based upon prior art and what the applicant did to improve it. However, there is a "notorious difference" between the standard of patentability applied by the Patent Office and that aplied by the courts. *Graham v. John Deere Co.* (1966), 383 U.S. 1. Such difference is attributable, perhaps, to the greater access of the courts to evidence of prior art, to the adversary nature of court proceedings, and to the greater breadth of judicial analysis. *Senate Report* No. 1202, 86th Cong. 2nd Sess. 21 (1960).

Despite the fallibility of the Patent Office, any estoppel of the licensee to challenge the validity of a patent requires that he accept the standard of the Patent Office for all purposes. The public interest, on the con-

trary, dictates that invalid patents be revealed, so that they are no longer a threat to free competition. The right to challenge validity "is not only a private right to the individual, but it is founded on public policy which is promoted by his making the defense and contravened by his refusal to make it." *Pope Mfg. Co. v. Gormully* (1892), 144 U.S. 224. The way should be kept open for "interested persons" to challenge validity. *Katzinger v. Chicago Metallic Mfg. Co.* (1947), *supra.* As stated by Judge Frank, concurring in *Aero Spark Plug Co. v. B. G. Corporation* (2d Cir. 1942), 130 F.2d 290, 294, "An invalid patent masquerading as a valid one is a public menace, and should be fair game."

If the way is kept open for all interested persons, including licensees, to challenge validity, higher standards will result, because in no case will the Patent Office standard be conclusive. On the contrary, the Constitutional standard which should be employed by the courts will not be debased by agreement of the parties, but will be uniformly applied in all instances.

In its past decisions this Court has dealt rather gingerly with the basic infirmities in patent policy which, apart from logical considerations, are inherent in a rule of estoppel of a patent licensee. Although in three early cases the Court indicated a possible receptivity to the estoppel rule, the status of the parties in two of these was significantly different from that involved in a mere licensor-licensee relationship.

Thus, in *Kinsman v. Parkhurst* (1856), 59 U.S. (18 How.) 289, where one partner sought an accounting for profits from his co-partner, the Court expressed the view that an assignee of a patent was estopped to allege patent invalidity as against his assignor. In fact, it held

that the relationship of the parties, as partners under an agreement for the sharing of profits from the making and selling of a patented machine, was such as to make immaterial the validity of the jointly-owned patent.

In *United States v. Harvey Steel Company* (1905), 196 U.S. 310, decided fifty years later, recovery was allowed in a suit brought against the United States to recover royalties under an agreement licensing it to use a patented process in making armor plate. A basic issue stemmed from the Government's contention, overruled by the Court, that a clause in the license agreement expressly permitted the Government to terminate its liability for royalties by showing the invalidity of the patent. The Court recognized that the clause had presumably been inserted on the assumption of the parties that a licensee in a suit for royalties was estopped to deny the validity of his licensor's patent, and held that the clause was intended to be effective only on a showing of such invalidity in third-party litigation. However, the Court did not find it necessary to consider the question of estoppel, since, regardless of patent validity, it found that there was no failure of consideration. The licensor was obligated, and in the view of the Court had fulfilled its obligation, to reveal information as to its secret process, and hence the licensee could not avoid its obligation to pay royalties. The Court's reference to the presumed assumption of the parties as to the estoppel of a licensee was not accompanied by any consideration of the merits of that doctrine, and clearly did not constitute an adoption of it.

The text of the opinion in the third case, *St. Paul Plow Works v. Starling* (1891), *supra,* may appear to support a rule of licensee estoppel. There the court stated that inasmuch as the license agreement under which the plaintiff sued for royalties contained no provision for revocation or termination, it was not revocable by the defendant except by mutual consent or by the fault of the other party. However, any conclusion that the decision, as a matter of substance, adopted a rule of licensee estoppel ignores the fact that the Court's statement was clearly predicated on a finding of the fact of patent validity. This is evidenced by the Court's thorough consideration and affirmance of the decision of the lower court, which had upheld the validity of the patent over six prior art patents. When the prior patents were offered in evidence at the trial, ". . . the plaintiff then and there objected to them, on the ground that the defendant was estopped from denying the validity of the plaintiff's patent". 140 U.S. 184, 189. This objection was overruled, and, despite the showing as to such prior art, the patent was held valid.

It is significant that in *Harvey Steel Company* the Court found it unnecessary to question or refer to *Pope Mfg. Co. v. Gormully* (1892), *supra,* decided the year after *St. Paul Plow Works,* where the Court, in ringing phrase, had announced the importance to federal patent policy of unfettered freedom to challenge invalid patents. There the licensee had agreed that, during the life of the licensed patents, it would not dispute the licensor's title to or the validity of those patents, as

well as of certain other patents. In denying injunctive relief to the licensor, the Court indicated that the agreement might well be void as against public policy, stating (p. 234):

> "It is as important to the public that competition should not be repressed by worthless patents, as that the patentee of a really valuable invention should be protected in his monopoly."[13]

Although on various occasions since *Harvey Steel Company* the estoppel-rule has been involved in cases which have come before it, the Court has never announced its adherence to the rule. On the contrary, with one exception, it has in each case found that the rule should not be applied under the circumstances there present. Thus, in *Sola Electric Company v. Jefferson Electric Company* (1942), *supra,* the Court held that the rule of licensee-estoppel was so in conflict with the Sherman Act's prohibition of the price-fixing stipulation in the license agreement that it should be ignored. Significantly, the Court pointed out that in *Harvey Steel Company,* where there was no price-fixing stipulation, "this rule of estoppel, which was not questioned by counsel, was applied without discussion", and specifically stated that it was not deciding whether any such rule was "rightly applied" in that case. Five years later, in *Katzinger v. Chicago Metallic Mfg. Co.* (1947), *supra,* and *MacGregor v. Westinghouse Elec. & Mfg. Co.* (1947), 329 U.S. 402,

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[13]Cf. the following similar statement from the recent opinion of Mr. Justice Black, writing for a majority of the Court in *Perma Life Mufflers, Inc. v. International Parts Corp.* (1968), 392 U.S. 134, 138;

> "We have often indicated the inappropriateness of invoking broad common-law barriers to relief where a private suit serves important public purposes."

the Court re-affirmed its holding in *Sola Electric, supra.* It did so even though the licensor in these later cases, unlike the licensor in *Sola Electric,* was not seeking to enforce the agreement's price-fixing provisions, and even though the license agreement in *Katzinger* included a provision to the effect that if the licensee elected to terminate the agreement without ceasing to manufacture the specified products, the licensee would "be estopped from denying the validity of said patent . . . and be deemed an infringer thereof."

In *Automatic Radio Manufacturing Co. v. Hazeltine Research, Inc.* (1950), 339 U.S. 827, the next action involving licensee estoppel which came before it, the Court decided that the licensee should not be permitted to challenge the validity of the licensed patents. However, the license agreement involved about seven hundred patents or patent applications, and the licensee, after being sued for royalties under the agreement, merely pleaded a partial failure of consideration in that about ten of the seven hundred were alleged to be invalid. The lower court decisions show that the license agreement was entered into for the purpose of settling litigation and that the consideration for the license agreement was freedom from suit with respect to the seven hundred patents and applications. *Hazeltine Research, Inc. v. Automatic Radio Mfg. Co.* (D. Mass. 1948), 77 F. Supp. 493; affirmed, (1st Cir. 1949) 176 F. 2d 799. Under such special circumstances there were ample grounds for precluding any challenge of the validity of the patents and applications, and the issue of licensee estoppel, as a matter of general principle, was immaterial.

A few months after *Automatic Radio Manufacturing Co.* (1950), *supra,* this Court resolved some uncertainty

as to the law governing patentability of an invention and validity of a patent, by holding that such questions are ultimately questions of federal law. *Great A. & P. Tea Co. v. Supermarket Equipment Corp.* (1950), 340 U.S. 147. This was reiterated in *Graham v. John Deere Co.* (1966), *supra.* These holdings came after the Court's earlier ruling in *Sola Electric Company v. Jefferson Electric Company* (1942), *supra,* that local rules of estoppel would not be permitted to thwart the purposes of the federal statutes and policies. Accordingly, licensee estoppel has no standing where a question of federal law is in issue, such as patentability or the validity or infringement of a patent.

Prior to *Automatic Radio Manufacturing Co.,* this Court had held in *Scott Paper Co. v. Marcalus Mfg. Co.* (1945), *supra,* that estoppel would not apply against an assignor of a patent where the assignee, suing the assignor for infringement, sought to foreclose the assignor from making use of the prior art of an expired patent which had anticipated the assigned patent. The rationale of the Court was succinctly stated in its opinion:

> ". . . the patent laws preclude the petitioner assignee from invoking the doctrine of estoppel, as a means of continuing as against respondent, his assignor, the benefit of an expired monopoly, and they preclude the assignor from estopping himself from enjoying rights which it is the policy of the patent laws to free from all restrictions. For no more than private contract can estoppel be the means of successfully avoiding the requirements of legislation enacted for the protection of a public interest."[14] (326 U.S. 249, 257).

[14]Compare the following statement of Mr. Justice Douglas, with whom Mr. Justice Black concurred, in his dissenting opin-

This Court should now explicitly recognize that the same paramount considerations which prompted its pronouncement in *Scott Paper Co.*, of the fundamental inconsistency of assignor-estoppel with federal patent policy, call for a similar pronouncement here that federal patent laws and policy must override whatever dubious common-law considerations may in the past have led some state courts to adopt a rule of licensee-estoppel.

C. Certain Facts Here Present Make Particularly Objectionable in This Case Any Estoppel of Lear, as Licensee.

(a) Lear, by Notice to Adkins, Renounced the License Agreement and Asserted Failure of Consideration by Reason of Non-Patentability of the Purported Invention and Invalidity of the Patent.

Lear renounced any liability with respect to the Michigan steel gyros on September 10, 1957, by notifying Adkins of the existence of prior art which showed that any claims of Adkins' patent application that might be of sufficient scope to cover the Michigan steel gyros were not patentable (A-II. 26, Ex. 36, R.T. 505). Subsequently, on April 8, 1959, Lear gave Adkins notice of termination of the entire agreement (A-II. 27, Ex. 39,

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ion at p. 840 in *Automatic Radio Manufacturing Co. v. Hazeltine Research, Inc.*, supra:

> "It is only right and just that the licensee be allowed to challenge the validity of the patents. . . . No other person than the licensee will be interested enough to challenge them. He alone will be apt to see and understand the basis of their illegality."

Compare also the view recently expressed by Mr. Justice White in *United States v. Singer Mfg. Co.* (1963), 374 U.S. 174, 200 where he noted in his concurring opinion:

> ". . . that public policy favors the exposure of invalid patent monopolies before the courts in order to free the public from their effects. Thus a licensee may not be prevented from attacking the validity of his licensor's patent."

R.T. 510). Thereafter, Lear no longer recognized the agreement as having any effect, claimed no rights under it, and made no further royalty payments. When Adkins brought suit for royalties, Lear in its answer pleaded failure of consideration with respect to all causes of action asserted by Adkins, on the ground of unpatentability of the claims of Adkins' application, and further alleged that the claims of the patent which ultimately issued were not patentable (A-I. 46, C.T. 1655-Fifth Defense; R.T. 2057, 2317).

Although the Superior Court recognized Lear's renunciation of the license agreement with respect to the Michigan steel gyros and determined Adkins' patent to be invalid, the California Supreme Court refused to consider patentability or validity or failure of consideration, on the ground that Lear was estopped to challenge these matters for all purposes. Such refusal of the California Supreme Court to recognize the inapplicability of the estoppel rule, even where the licensee specifically disclaims any further rights as licensee, is contrary to views expressed by many other courts and by this Court.

Thus, in *Crew v. Flanagan* (Minn. 1954), 242 Minn. 549, 65 N.W. 2d 878, the Minnesota Supreme Court, after reviewing the various decisions of other courts, stated:

> ". . . But the view now supported by the weight of authority in recent cases is that the licensee may dispute the validity of the patent under which he is licensed after he has repudiated the license, even though such patent has not been shown to be invalid in third-party proceedings."

A similar view found early expression, as a matter of federal law, in *Brown v. Lapham* (C.C.N.Y. 1886), 27 F. 77, where the court said:

> ". . . When he [the licensee] stands out from under the license, and claims nothing from it, and does nothing more under it, with full knowledge to the licensor of his position, he would appear to be at as full liberty to contest the patent as anyone."

To the same effect were *Holmes, Booth & Haydens v. McGill* (2nd Cir. 1901), 108 Fed. 238, and *Bucky v. Sebo* (2nd Cir. 1953), 208 F.2d 304.

In *Dale Tile Manufacturing Company v. Hyatt* (1888), 125 U.S. 46, this Court affirmed as "clearly right" a decision of the New York Court of Appeals holding a licensee liable for royalties, on the ground that while the licensee retained and acted under its license from the plaintiff, it could not, in the absence of a determination of invalidity of the patent in third-party litigation, deny the validity of the patent. But the Court quoted at length the lower court's opinion, which, as quoted at p. 50, had stated:

> "In other words, so long as the defendant continues to manufacture under its license (the patent not having been legally annulled), and thus elects to treat the agreement as in existence, it prevents the plaintiff from treating the defendant in any other light than that of a licensee. If the defendant desired to repudiate any obligation under this agreement, it should have given notice to the plaintiff that it refused to longer recognize its binding force, and that it would thereafter manufacture under a claim of right founded upon the alleged invalidity of the patent."

Recognition of the right of the licensee to renounce a license agreement where he challenges the validity of his licensor's patent does not, of course, provide such a licensee with immunity in the event of a determination of validity. As recognized in the passage quoted above (p. 34-n. 12) from this Court's opinion in *St. Paul Plow Works* (1891), *supra,* such a licensee must be willing to run the risk that the licensor will be successful in an infringement action, with a right to recover damages, including punitive damages, which may far exceed the royalties that the licensee would otherwise have paid. But of course the licensor, if he so elects, may, in reliance on his ability to sustain the validity of his patent, take the position that the license agreement is still in effect and sue for royalties. As this Court recognized in *St. Paul Plow Works,* "The defendant [the licensee] could not coerce the plaintiff into putting an end to the contract, by the means it adopted."

(b) The License to Lear Was Granted Under a Pending Patent Application, and the Patentability of Adkins' Claims Was Challenged Prior to the Issuance of Any Patent Thereunder.

This Court clearly indicated in 1924 that estoppel to contest the claims of an application for a patent may be subject to different considerations than are applicable to issued patents. *Westinghouse Electric & Mfg. Co. v. Formica Insulation Company* (1924), *supra.* That case was concerned with the possible estoppel of the assignor of a patent application to contest validity in a suit by the assignee alleging infringement of the subsequently-issued patent. After observing that, although the Court would not lightly disturb the recognized rule

of estoppel of an assignor of an issued patent, Chief Justice Taft, writing for the Court, stated:

> "... . The case before us, however, concerns assignment of an invention and an inchoate right to a patent therefore before the granting of it which, after the assignment at the instance of the assignee, ripened into a patent. . . . When the assignment is made before patent, the claims are subject to change by curtailment or enlargement by the Patent Office with the acquiescence or at the instance of the assignee, and the extent of the claims to be allowed may ultimately include more than the assignor intended to claim. This difference might justify the view that the range of relevant and competent evidence in fixing the limits of the subsequent estoppel should be more liberal than in the case of an assignment of a granted patent. How this may be, we do not find it necessary to decide." 266 U.S. 342, 353.

Whether it is consistent with the purposes and provisions of the federal patent laws to estop a licensee under a patent application has also been questioned in at least two cases subsequent to the decision in the *Westinghouse* case: *Baldwin Rubber Co. v. Paine & Williams Co.* (6th Cir. 1939), 107 F.2d 350; and *Stubnitz-Greene Spring Corporation v. Fort Pitt Bedding Co.* (6th Cir. 1940), 110 F.2d 192.

The controlling applicability, as to a license agreement under a pending patent application, of this Court's decision in *Scott Paper Co. v. Marcalus* (1945), *supra,* was recognized in *United States v. General Instrument Corp.* (D.N.J. 1953), 115 F.Supp. 582, where the court, in reliance upon the passage from this Court's opinion in *Scott Paper Co.* quoted above (p.

41) refused to approve a provision of a proposed consent decree under which, in licenses to be granted under pending patent applications, the licensee would agree not to contest the validity of any patent subsequently issued thereunder. The lower court's view was that ". . . an agreement by a licensee not to contest the validity of a patent would unlawfully extend the scope of monopoly granted under the patent laws beyond their boundaries into the domain where the public has an interest, to which such a private contract would be repugnant." (115 F.Supp. 582, 590)

The circumstances here present, under which the court below estopped the licensee under a patent application, illustrate the soundness of the concern voiced by this Court in *Westinghouse* and the condemnation expressed by the lower federal court in *General Instrument Corp.* For here the patent application had been amended six times (A-II. 68, 77, 81, 90, 96, 103, Ex. P, 36, 45, 49, 58, 64, 71, R.T. 1328) after its filing on February 15, 1954. The amendments altered not only the claims for which a monopoly was sought, but altered also the description of the invention in the specification. The patent issued with claims which Lear, as licensee, had never seen. They were not in the nature of method claims which had been contained in the application when the license agreement was signed. On the contrary, they were directed to apparatus rather than method and had been neither filed nor allowed when Lear as licensee gave notice of termination on April 8, 1959.

To invoke the rule of estoppel against a licensee under such extreme circumstances would, in clear contravention of the Constitutional standard for a patent monopoly and the basic policy of the patent laws, grant

a potential *de facto* patent monopoly to any person who, under the guise of a purported invention, has an application on file with the Patent Office.

(c) The License Agreement, as Interpreted by the Court Below, Embodies a Condition Which, in the Absence of a Valid Patent, Is in Restraint of Trade and Unenforceable.

Section I of the Argument has set forth the basis upon which we believe this Court should hold that any contractual requirement of cessation of manufacture as a condition of termination clearly constitutes a patent misuse and contravenes the policy of the antitrust laws. If, as urged in that Section, the inclusion of such a provision renders the entire agreement unenforceable, regardless of the validity of Adkins' patent, then the issue of estoppel to challenge such validity need not be considered. However, if it is the view of the Court that the misuse of the patent monopoly and the extension of the monopoly by either the patentee or by the state court, through construction of the agreement, does not render the agreement unenforceable, then the validity of the patent must be considered. For then, in the words of Judge Frank, a valid patent is necessary to "rescue" the agreement "from the jaws of the anti-trust laws"[15], and clearly estoppel of either party, even if acceptable under some circumstances, would be squarely at variance with sound principles of the patent and antitrust laws.

Prior decisions of this Court support, and indeed compel, this conclusion. Thus, in *Sola Electric Company v. Jefferson Electric Company* (1942), *supra*, and

[15] *Nachman Spring-Filled Corporation v. Kay Mfg. Co.* (2nd Cir. 1943), 139 F.2d 781, 784.

MacGregor v. Westinghouse Elec. & Mfg. Co. (1947), *supra,* the Court held that where a license agreement contains a provision which, in the absence of a valid patent, would be in restraint of trade, the rule of licensee estoppel cannot be used as a shield to preclude investigation of the validity of the patent. And this is the case, even if such an agreement includes an express undertaking of the licensee not to challenge the validity of the patent. *Katzinger v. Chicago Metallic Mfg. Co.* (1947), *supra.* To allow estoppel by a state court under such circumstances would, contrary to *Sears, Roebuck & Co. v. Stiffel Co.* (1964), *supra,* sanction the application by the state courts generally of purported non-federal legal doctrine in a manner which would debase the Constitutional standard of patentability and undermine basic objectives of the federal patent and antitrust laws.

III.

THE RECORD BEFORE THE COURT SHOWS THAT THE CLAIMS OF ADKINS' APPLICATION WERE NOT PATENTABLE, AND THAT HIS PATENT IS INVALID.

This Court has given abundant recognition to the paramount public importance of resolving questions of patent validity. *Sinclair & Carroll Co. v. Interchemical Corp.* (1945), 325 U.S. 327, 300. Furthermore, in *MacGregor v. Westinghouse Elec. & Mfg. Co.* (1947), *supra,* where the Court held that a state court had been in error in estopping a patent licensee, its opinion indicated that it could pass on the issue of patent validity where the record was sufficient to enable it to do so. In that case, however, the Court held the record to be insufficient.

In this case the issue of the validity of Adkins' patent would of course not require determination if, for the reasons advanced in Section I of the Argument, the Court were to hold that this case should be disposed of on the ground that the license agreement is unenforceable, regardless of the validity of the patent. However, even if the license agreement is held to be enforceable, we have urged that, for the reasons advanced in Section II of the Argument, Lear is not estopped to challenge the validity of Adkins' patent. In that event a determination that the patent is invalid would eliminate any remaining issues and would effectively and promptly terminate eight years of state-court litigation involving basic questions solely of federal law.

Unlike the record in *MacGregor*, there is an ample record before the Court in this case relevant to the patentability of the claims of Adkins' application and the validity of his patent. Furthermore, the Superior Court, as a matter of law, has already determined such claims to be unpatentable and Adkins' patent to be invalid, resting its conclusion entirely on an analysis of certain prior art patents which were in evidence and are a part of the record.

Accordingly, we deem it appropriate to call the attention of the Court to those portions of the record which establish the invalidity of Adkins' patent, so that by passing on that issue, as raised by Question Three of the Questions Presented, the Court may be in a position to effect a final disposition of this already pro-

tracted litigation. Such a disposition of the case will preclude the risk of further state-court error in applying the Constitutional standard of patentability —an area which this Court has recognized as particularly within its province. *Graham v. John Deere Co.* (1966), *supra.*

The only claims of the application that were found to be patentable are claims 9-16 of the patent, which are directed to an apparatus for supporting bearings in alignment (A-II. 24, Ex. 10, R. T. 304)[16]. The alignment of bearings on the opposite ends of a shaft to reduce friction is a well-known and simple principle of mechanics, which was previously before this Court in *Singer Mfg. Co. v. Cramer* (1904), 192 U.S. 265, 269.

The apparatus for supporting bearings in alignment which is shown and described in Adkins' patent employs three elements which are admittedly old in the art (R.T. 2883). The elements are: a pair of bearing-receiving elements, supports for the elements located at opposed locations, and means for retaining the bearing-receiving elements in the supports after they have been aligned.

The drawings and the detailed description of the patent show bearing-receiving elements having both a cavity for receiving the bearing and a spherical surface to engage the surfaces of the supports and provide a

[16]The other claims and the other subjects covered by the patent are not involved in this action (R.T. 1278).

rocking action for alignment. The supporting surfaces are cone-shaped surfaces in the gimbal or frame. The means for securing the bearing-receiving elements in the supports is described as solder, cement, weld or screws.

Thus, the apparatus for supporting bearings which Adkins' patent describes is essentially a ball-and-socket, as illustrated in Figure 1.

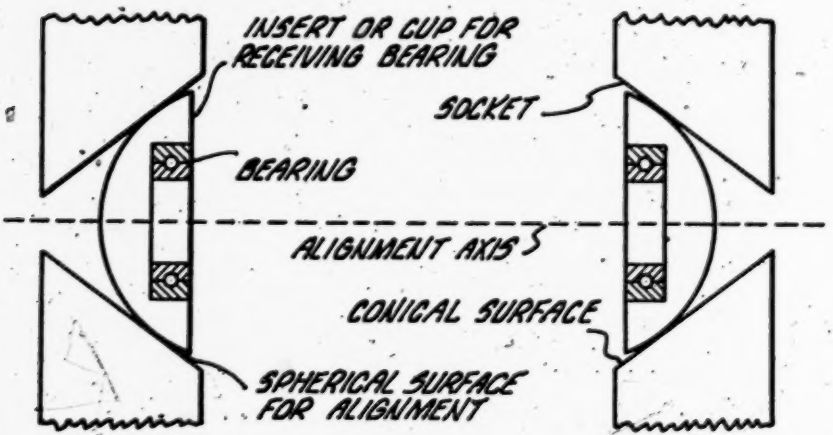


FIGURE 1.

The portion of Adkins' description of the bearing supporting apparatus contained in the original specification and the figure of the application which are directed to such supporting apparatus are shown on Figure 2, opposite this page. Figure 2 also shows the main claim of Adkins' patent (Claim 9) with the three elements, referred to above, designated by the letters a, b, and c. This figure also shows a simplified schematic of the elements taken from the patent drawing, in an assembled configuration at the bottom of the figure and broken away in an exploded view at the side of the figure, with

DESCRIPTION OF INVENTION FROM ORIGINAL SPECIFICATION FILED

February 15, 1954

This invention relates to gyroscopes and more particularly to balanced vertical flight gyroscopes or gyro vertical for use in aircraft and the like. The invention is especially addressed to a novel erecting mechanism well adapted to vertical gyroscopes, and to a novel caging system and method of assembling, applicable to gyroscopes in general.

A further object of the invention is to provide a novel method of aligning the various bearings in the gimbal mountings, whereby exact coaxial alignment and parallelism between opposed bearings may be achieved.

The method of insuring exact coaxial alignment and parallel spacing of the various ball bearings employed in the rotor and gimbals includes the steps of providing annular inserts having peripheral spherically shaped surface portions adapted to be seated against inner conical surfaces provided in the gimbal frames. The ball bearing races are in turn secured to these inserts and the respective surfaces positioned relative to each other with the aid of a suitable jig until the desired alignment is realized. The inserts are then secured in place either mechanically or by cementing and the aligning jig removed. The engaging spherical and conical surfaces permit the bearing race axis to be oriented in any direction during the adjusting period whereby coaxial alignment and parallelism of the bearing races may be easily effected. Other surfaces capable of being aligned and fixed in position such as a sphere in sphere, knife edges or other devices may be used without coming outside the scope of this invention, and the method may be used to align the holder for the inner or outer races, or both.

A better understanding of the various features of the present invention will be had by referring to the accompanying drawings in which:

Figure 2 is an elevational cross-sectional view of a preferred construction of the gyroscope in which the various gimbal mountings are all co-planar for purposes of illustration;

Bearing alignment

Referring once again to Figure 2, a feature of the pres-

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A better understanding of the various features of the present invention will be had by referring to the accompanying drawings in which:

Figure 2 is an elevational cross-sectional view of a preferred construction of the gyroscope in which the various gimbal mountings are all co-planar for purposes of illustration;

Bearing alignment

Referring once again to Figure 2, a feature of the present invention contemplates a novel method for insuring precise coaxial alignment of the various bearings journaling the gimbal and rotor shafts. As an example, the bearings 59 and 60 shown secured to opposite sides of gimbal mounting 11 in Figure 2, must be coaxial with respect to each other and lie in parallel planes in order that the inner gimbal mounting shafts 61 will be supported for minimum bearing friction.

In accordance with the method, the inner annular surfaces 62 of the sockets in the intermediate gimbal mounting 11 are of a conical shape. The bearings 59 and 60 are in turn secured to insert elements 63 each having an annular peripheral surface 64 of the shape of a portion of a sphere, adapted to seat against the conical surface 62. During the initial adjustments, a suitable jig supports the bearings 59 and 60 and attached inserts 63. Because of the conical shape of the surface 62 and the spherical shape of the peripheral surface 64 of the inserts, the axis of each bearing may be properly oriented by a rotating motion applied to the race. This latter motion can be easily accommodated by the engaging surfaces in view of their different curved shapes. It is thus possible to align precisely the two bearings by means of a jig, at which moment the inserts 63 are secured to the gimbal mounting sockets as by cementing, welding, soldering, or by screws, for example. The aligning jig may then be removed and the assembly of the gyroscope completed. The same method may be employed for mounting the rotor 13 on the shaft S and for aligning the bearings in the outer gimbal 10 journalling the inner gimbal 11.

The jig used in aligning the bearings may be very simple and in one form takes the shape of a cylindrical rod upon which the bearings are slid preparatory to mounting in their supports. The rod is, of course, accurately formed to be round, without taper, and straight, and held to these conditions within extremely small tolerances. While such a jig requires precision work, it is comparatively simple to secure such a rod and maintain it within the required tolerances. Previous methods of construction have required the use of precision boring jigs to bore accurately aligned and concentric holes to receive the bearings, and such a jig is both difficult and expensive to fabricate, and easy to get out of adjustment.

While the use of mating conical and spherical surfaces has been mentioned, it is apparent that other similarly cooperating surfaces can be used. For example, a spherical surface can be used within another spherical surface, and other combinations can be employed. Similarly, the inner race of a bearing may be aligned with its holder, or both the inner and outer races may be aligned with their respective holders.

Fig. 2

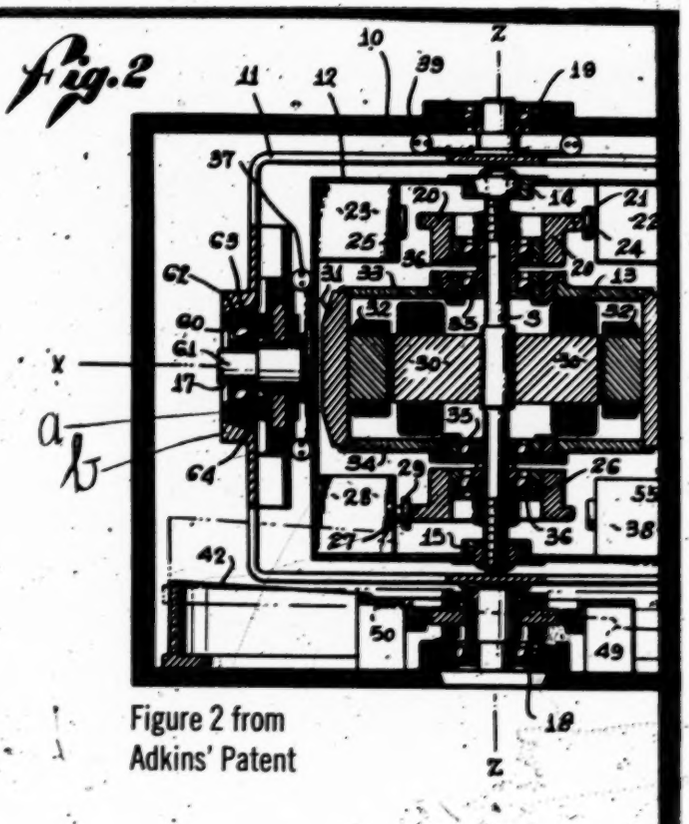
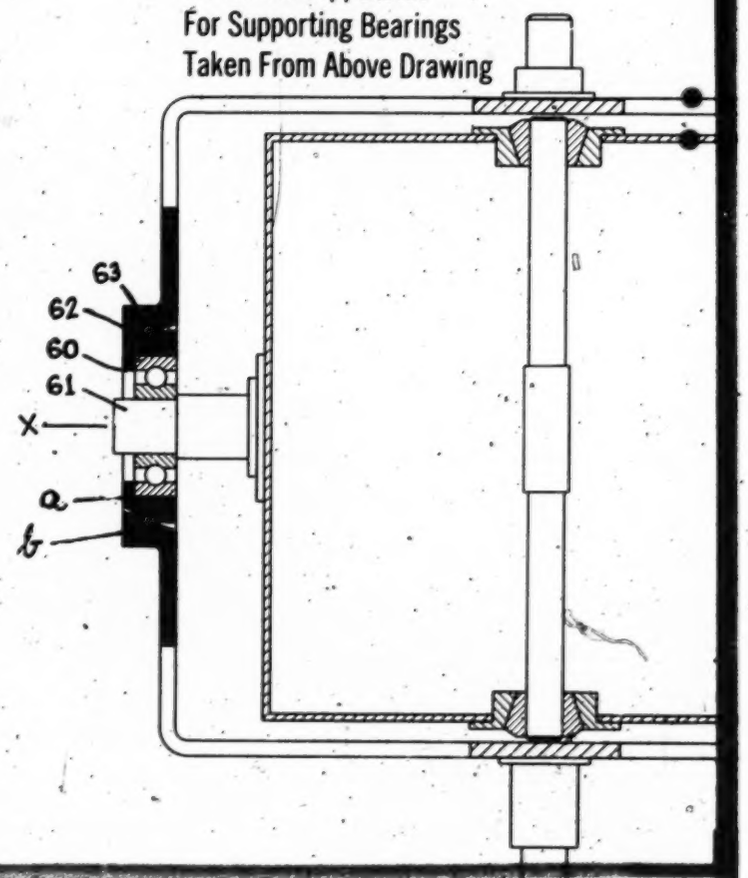


Figure 2 from Adkins' Patent

Schematic of Assembled Apparatus For Supporting Bearings Taken From Above Drawing



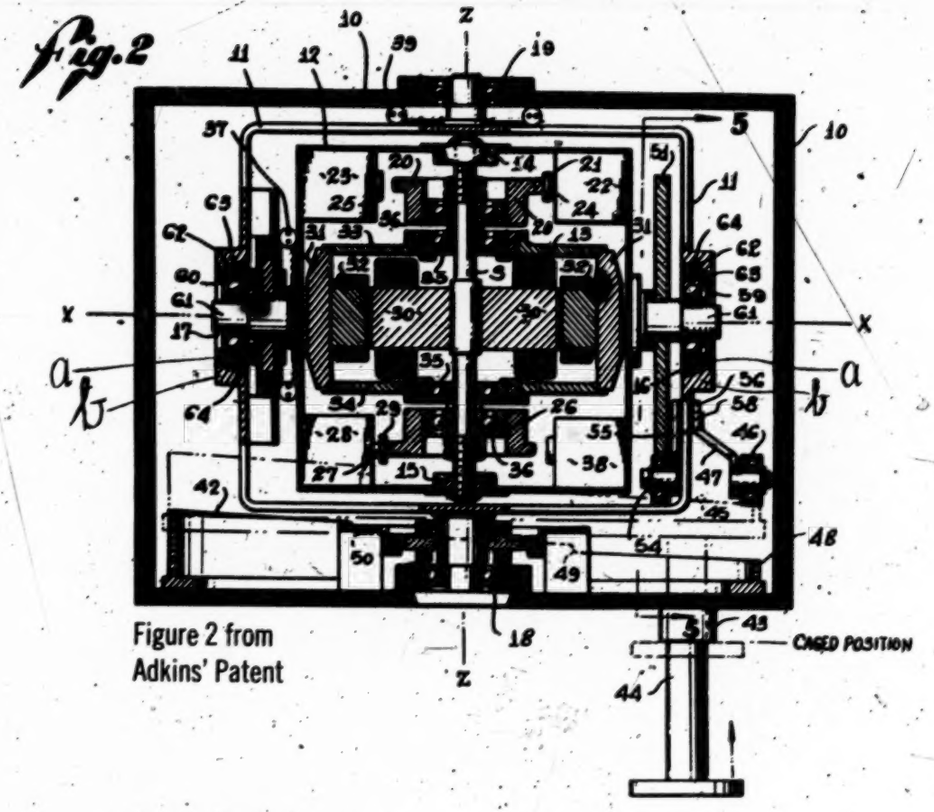


Figure 2 from Adkins' Patent

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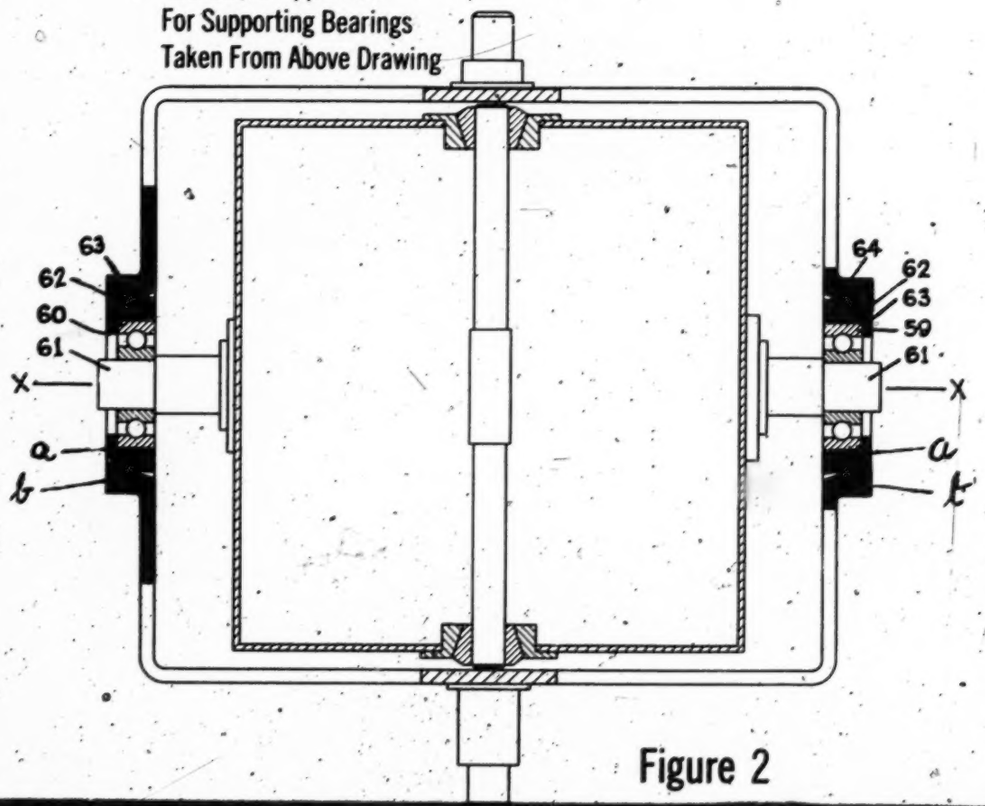


Figure 2

MAIN CLAIM

CLAIM 9

An apparatus for supporting bearings in aligned relationship which comprises,

a. a pair of bearing-receiving elements each providing means to removably support a bearing in a fixed relationship with said element,

a.′ each of said bearing-receiving elements having a mounting surface by which it may be supported,

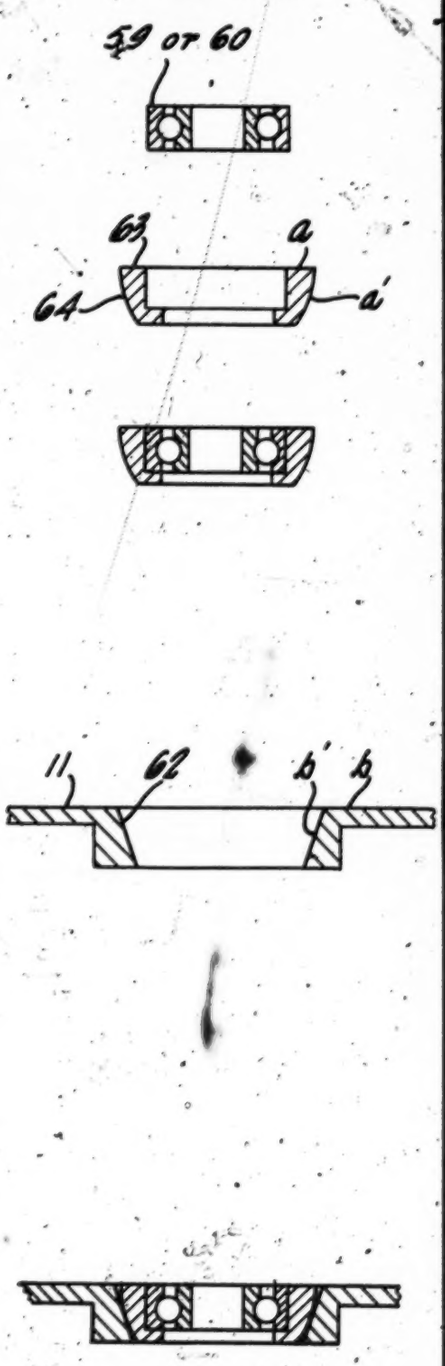
b. means for supporting said bearing-receiving elements at opposed relatively spaced positions,

b.′ said supporting means providing supporting surfaces generally corresponding to said mounting surfaces and permitting said elements to be initially adjustably shifted relative to said supporting means into oriented positions where said bearing-supporting means are in alignment with each other.

c.* and means to retain said bearing-receiving elements in said oriented positions to permit pairs of bearings to be interchangeably mounted in aligned relationship supported by said bearing supporting means.

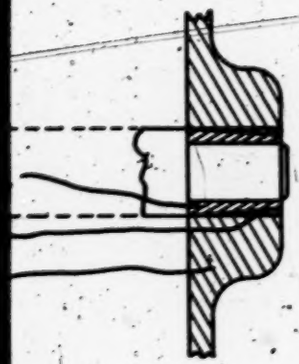
*Not shown on Adkins patent drawing, but described as solder, cement, weld, screws, etc. (Col. 7, lines 48 & 49 of Ex. 10) or generally as securing in place either mechanical or by cementing (Col. 2, lines 56 & 57 of Ex. 10).

EXPLODED VIEW OF ELEMENTS OF APPARATUS

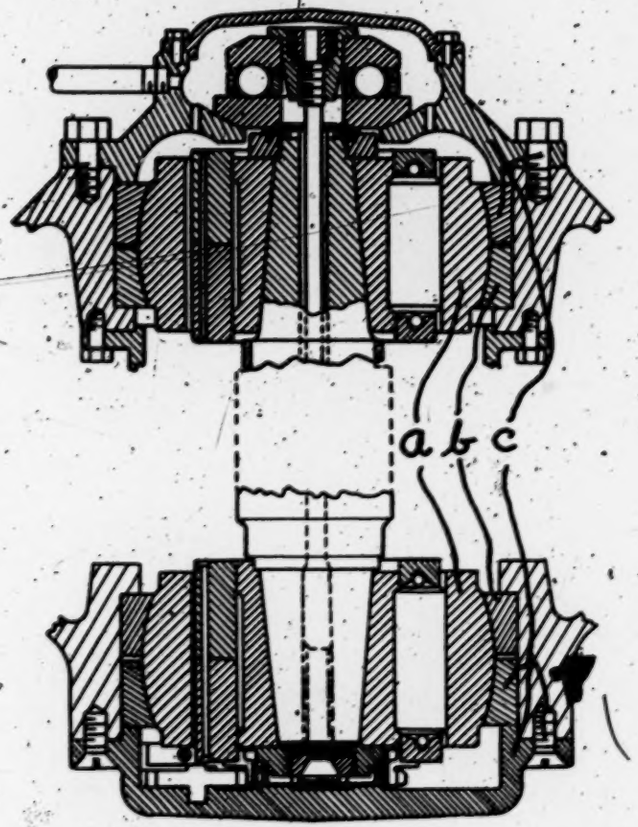


S FOR SUPPORTING BEARINGS OF ADKINS'
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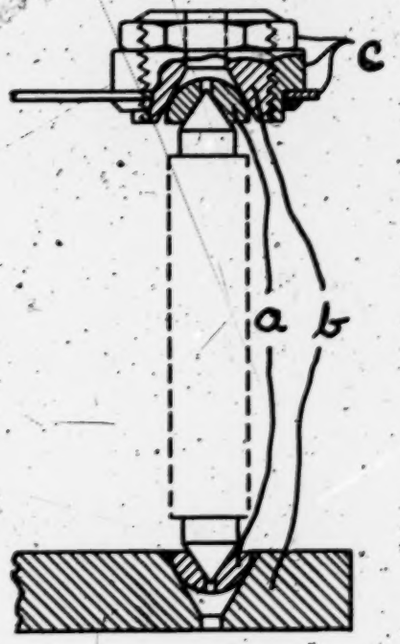
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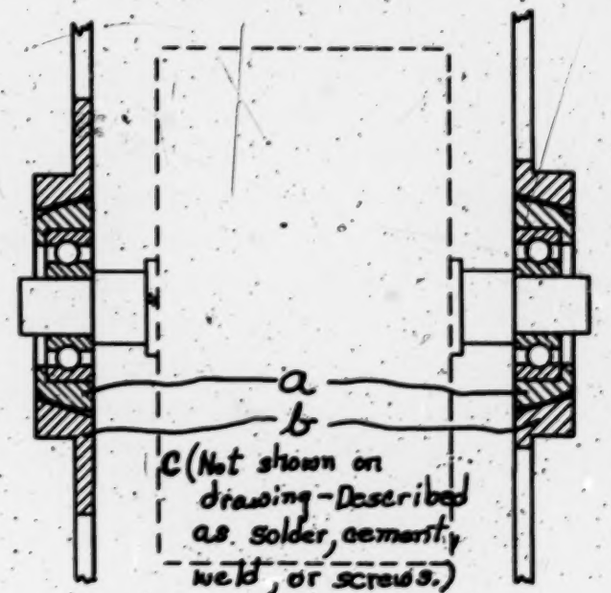
SPERRY PATENT 1342397
(EXHIBITS A-51 & A-52)



HERR PATENT 2633544
(EXHIBITS A-45 & A-46)



ADKINS' PATENT 2919586
(EXHIBITS 10 & A-25)



the letters being applied to the corresponding elements. Two of the elements, a and b, have specific limitations which are identified as a′ and b′.

The descriptive material of the specification is directed primarily to the method of assembling the gyro, and it refers to the use of a jig or rod for positioning the bearings in proper alignment. However, it is essential to note that the claims of the patent are limited to structural apparatus, and that they do not cover the method of employing the jig or rod which is described.

The descriptive material mentions in passing that the supporting surfaces may be a sphere in a sphere or knife edges, as well as the combination of sphere and cone which is described in detail.

Alignment is achieved by causing the outer periphery of the respective bearing-receiving elements to move on the surface of the socket to the desired orientation. This is described in the patent as follows:

> "Because of the conical shape of the surface 62 (in the gimbal or frame) and the spherical shape of the peripheral surface 64 of the inserts, the axis of each bearing may be properly oriented by a rotating motion applied to the race. This latter motion can be easily accommodated by the engaging surfaces in view of their different curved shapes." (A-II. 23, col. 7 of Exhibit 10, R.T. 304).

The Michigan steel gyros employ a pair of bearing-receiving elements in which alignment is achieved in a different manner. It is done by positioning the elements in oversize holes located at opposite sides of the frame, as illustrated in Figure 3 on page 54.

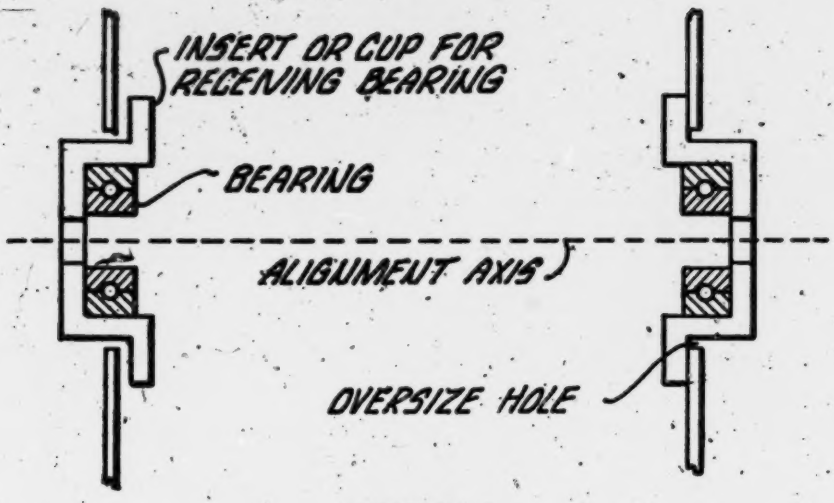


FIGURE 3.

Adkins asserts that his claims cover the structural apparatus of the Michigan steel gyros, as illustrated in Figure 3. Thus, a review of the validity of the claims of Adkins' patent must be based directly upon the structural apparatus illustrated in Figure 1. Furthermore, if the claims are to be construed broadly enough to cover the Michigan steel gyros, they must also be based upon the structure illustrated in Figure 3. However, if the claims as so construed also read on the prior art, they are invalid.

As determined by this Court in *Great A. & P. Tea Co. v. Supermarket Equipment Corp.* (1950), *supra,* the question of patentability of the alleged invention is a question of federal law. The Superior Court noted the applicable standard of invention stated in *Great A. & P. Tea Co.,* where, as here, all of the elements of the claimed invention were old. Applying this standard, the court held that "the prior art . . . dissipate [sic] any presumption of validity in the case at bar"

(A-I. 80), and, without relying on the extensive testimony in the record (R.T. 1066-2572) but solely on the basis of the uncontroverted prior art patents[17] in evidence, found invalidity as a matter of law.

The court found that Adkins' device was anticipated[18] by the patent to Grenat which was cited by the Patent Office, and that a mechanic[19] with ordinary skill could make Adkins' device from the teachings of the patent to Herr, which was not cited (A-I. 77-79). Furthermore, the court found that, to the extent that Lear's Michigan steel gyros might be within the scope of Adkins' patent, there was complete anticipation by the patent to Schwan, and that they would be obvious in view of the patent to Moody (A-I. 78).

A comparison by this Court of the apparatus defined by the claims of Adkins' patent, and of the prior art shown in the patents considered by the Superior Court, will support that court's conclusion that ". . . a dunderhead oversizing ever so little the bearing holes in Moody's patent, or using Schwan's bearing as it is, would come up with precisely the device manufactured by Lear (*i.e.,* the Michigan steel gyro)" (A-I. 81). Such a comparison is readily made by inspection of the side-by-side drawings of each apparatus shown in Figures 4-I and 4-II, between pages 56 and 57. Such

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[17]The prior art patents that were considered by the Superior Court are: Grenat (A-II. 118, Ex. A-27, R.T. 1138). Herr (A-II. 148, Ex. A-45, R.T. 1162). Schwan (A-II. 121, Ex. A-31, R.T. 1147). Moody (A-II. 142, Ex. A-40, R.T. 1157). Carlson (A-II. 138, Ex. A-38, R.T. 1155). Sperry (A-II. 152, Ex. A-51, R.T. 1292). Harding (A-II. 126, Ex. A-34, R.T. 1150).

[18]35 U.S.C., Sections 101, 102 (Br. A., *infra* 2).

[19]35 U.S.C., Section 103 (Br. A., *infra* 3).

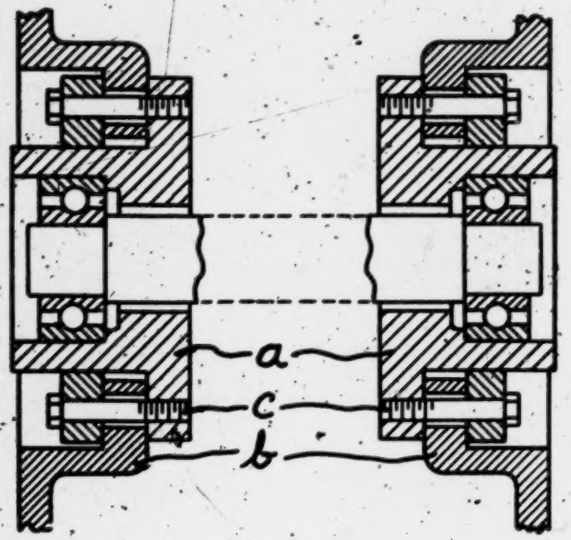
drawings constitute a summary of how the structural elements of Adkins' claims appear in the prior art patents. They show that Adkins' patent was anticipated under 35 U.S.C., Sections 101 and 102, and was obvious under 35 U.S.C., Section 103.

In Figure 4-II the three structural elements of Adkins' main claim are identified by the letters a, b, and c, and limitations on these elements are identified by those letters primed, in the same manner that they are identified in Figure 2, opposite page 52. The same letters are applied to the corresponding elements of the structure shown in the drawing of Adkins' patent, and also to the corresponding elements of the structures shown in the drawings of the prior art patents. In Figure 4-I the elements are shown assembled, and in Figure 4-II they are shown in exploded view, to show the similarities of both the assembled combinations and the individual elements.

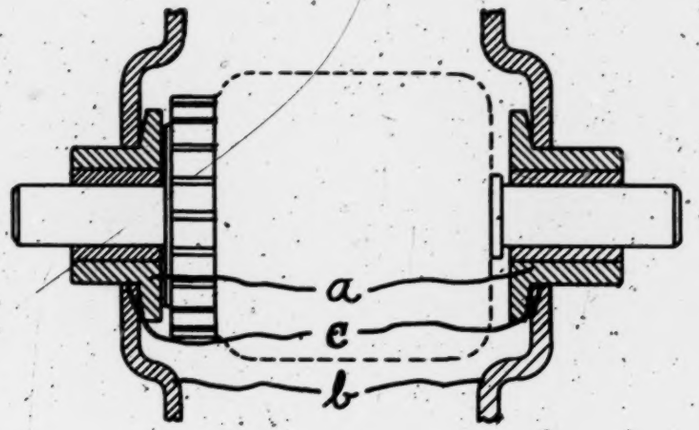
The elements of Adkins' claims must be construed in accordance with what is shown in his patent drawings and also in accordance with the description of these elements in the patent in order to ascertain whether or not the elements and the assembly, as so disclosed, are shown by the prior art patents. Adkins' patent states that the invention is equally applicable to supporting either ball or sleeve bearings (A-II. 23, Ex. 10, col. 8, line 37, R.T. 304); that the bearing-receiving elements and their sockets in the frame may have confronting surfaces of any desired configuration to provide alignment (A-II. 23, Ex. 10, col. 8, lines 27-30, R.T. 304); that to secure the bearing-receiving elements in place either mechanical means or cement may be employed, and that solder, cement, weld, screws, etc. are

ASSEMBLED APPARATUS FOR SUPPORTING BEARI
PATENT AND PRIOR ART PATENT

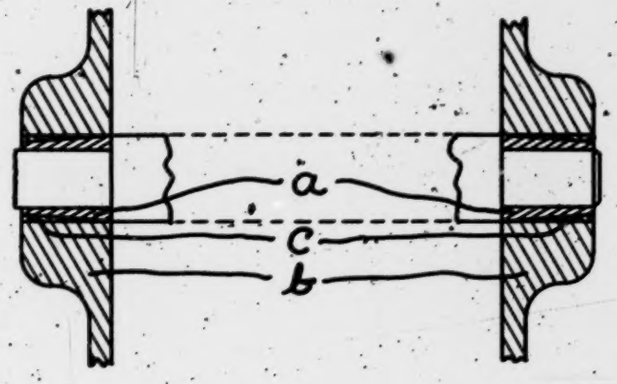
SCHWAN PATENT 2704693
(EXHIBITS A-31 & A-32)



MOODY PATENT 2530533
(EXHIBITS A-39 & A-40)



GRENAT PATENT 2531334
(EXHIBITS A-27 & A-28)



EXPLODED VIEW OF ELEMENTS OF APPARATUS FOR SUPPORTING BEARING

ADKINS' PATENT 2919586
MAIN CLAIM

CLAIM 9

An apparatus for supporting bearings in aligned relationship which comprises.

a. a pair of bearing-receiving elements each providing means to removably support a bearing in a fixed relationship with said element,

a.′ each of said bearing-receiving elements having a mounting surface by which it may be supported,

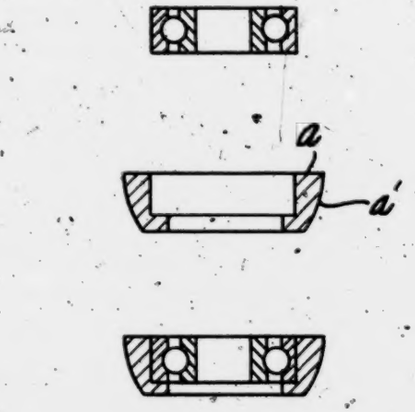
b. means for supporting said bearing-receiving elements at opposed relatively spaced positions,

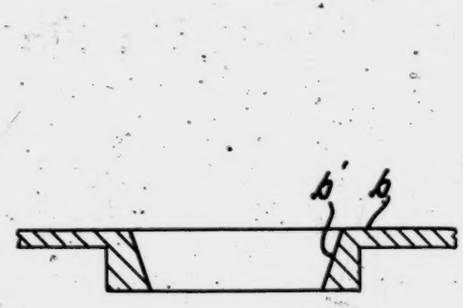
b.′ said supporting means providing supporting surfaces generally corresponding to said mounting surfaces and permitting said elements to be initially adjustably shifted relative to said supporting means into oriented positions where said bearing-supporting means are in alignment with each other,

c.* and means to retain said bearing-receiving elements in said oriented positions to permit pairs of bearings to be interchangeably mounted in aligned relationship supported by said bearing supporting means.

*Not shown on Adkins patent drawing, but described as solder, cement, weld, screws, etc. (Col. 7, lines 48 & 49 of Ex. 10) or generally as securing in place either mechanical or by cementing (Col. 2, lines 56 & 57 of Ex. 10).

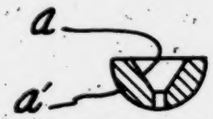
ADKINS' PATENT 2919586

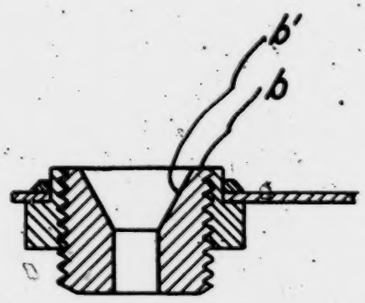






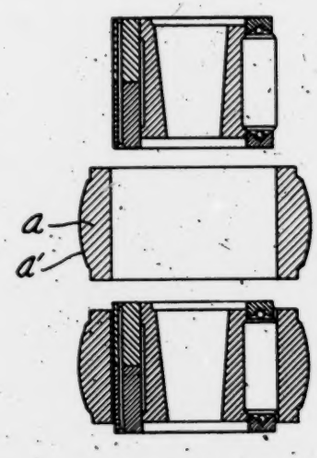
HERR PATENT 2633544

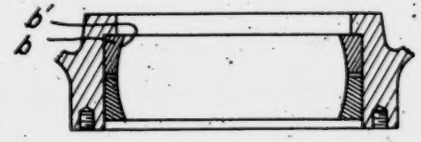






SPERRY PATENT 1342397





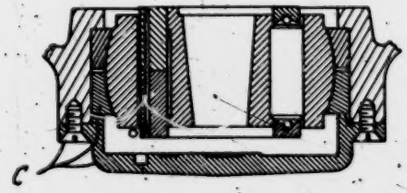


Figure 4-II

PARATUS FOR SUPPORTING BEARINGS OF ADKINS' PATENT AND PRIOR ART PATENTS

SPERRY PATENT 1342397

GRENAT PATENT 2531334

MOODY PATENT 2530533

SCHWAN PATENT 2704693

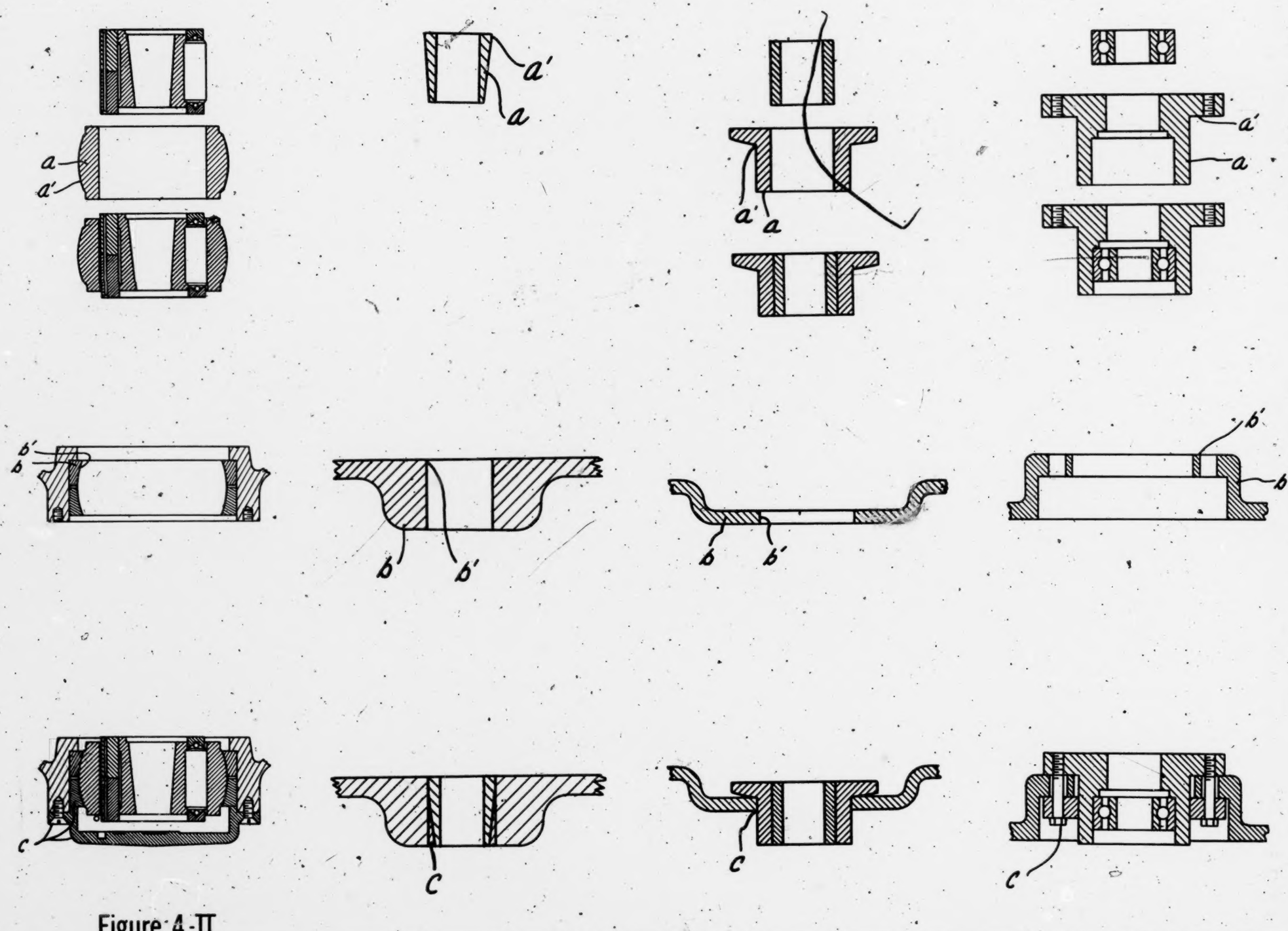


Figure 4-II



all suitable (A-II. 20, 23, Ex. 10, col. 2, lines 56-67, col. 7, lines 48-49, R.T. 304); and that the invention is applicable to the alignment of bearings for any rotatable device, such as motor shafts (A-II. 23, Ex. 10, col. 8, lines 32-33, R.T. 304).

The elements a, b, and c of Adkins' structure for supporting bearings, as so described and shown, are found individually and in combination in most of the prior art patents in the record. The most pertinent prior art is shown in the patents to Herr, concerning an electric motor; Sperry, concerning gyroscopes; Grenat, concerning bearing alignment; Moody, concerning electric motors; and Schwan, concerning bearing supports for electric motors. Only Grenat and Schwan have claims directed to bearing supports. However, the other patents constitute prior art for everything shown even though the bearing supports were not claimed as inventions.

The patent to Herr shows a sphere-in-a-cone structure, which is very similar to Adkins' structure. Herr differs from Adkins in that the cone-shaped bearing surfaces (which are similar to sleeve bearings) are integral with the bearing-receiving elements *a* so that the bearings are replaceable[20] only by replacing the entire elements *a*, and in that these elements are not permanently affixed to the frame but rather are loosely clamped by the nut *c* and the spring arm supporting the nut.

The patent to Sperry shows a sphere-in-a-sphere structure, similar to that described by Adkins. Sperry differs from Adkins only in that the patent does not

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[20]Replaceable bearings were not mentioned in Adkins' application until the amendment of December 19, 1958, as will be discussed in Section IV A (1), *infra*.

state whether or not the retaining means *c* is tightened sufficiently to affix the bearing-receiving elements *a* to the frame *b*. If it is so tightened, Adkins' claim reads directly upon Sperry.

The patent to Grenat shows tapered sleeve bearing elements *a* which are placed on a mandrel or rod and inserted into holes in the frame to achieve alignment by rocking on the shoulders *a'*. Grenat differs from Adkins in that the bearing surfaces are integral with the bearing-receiving elements, so that the bearings are replaceable only by replacing the entire elements *a*. If the elements *a* were divided into two portions or sleeves, or if sleeve bearings were placed inside the elements *a*, Adkins' claim would read directly upon Grenat.

The patent to Moody shows bearing-receiving elements *a* which extend through opposed holes in the frame that provide a press-fit. The bearing-receiving elements *a* are assembled on the shaft and then adjusted in the press-fit holes by tapping the assembled apparatus to cause the bearing-receiving elements *a* to move into more nearly perfect alignment. Adkins' claim reads directly upon Moody.

The patent to Schwan shows bearing-receiving elements *a* which extend through oversize holes in the frame *b*, so that they may be adjusted by shifting to achieve alignment with one another. The bearing-receiving elements *a* are retained in position by screws *c*, which also extend through oversize holes in the frame *b* to permit initial adjustment. Schwan differs from Adkins only in that Schwan's bearing-receiving elements

are positioned by shifting the bearing-receiving elements *a* along the frame *b* to position the bearing-receiving elements *a* in the oversize holes in the frame *b* to achieve alignment, whereas Adkins' bearing-receiving elements are aligned by the angular adjustment provided by the ball-and-socket action.

The structure shown by Schwan is almost identical with that of Lear's Michigan steel gyros, as illustrated in Figure 3, on page .54. The Michigan steel gyros use cement to secure the bearing-receiving elements in place whereas Schwan uses screws. However, these are similarly treated by Adkins. In both the Schwan apparatus and the Michigan steel gyros, the bearing-receiving elements are located in oversize holes and they are affixed to the frame after alignment. Angular adjustment by the ball-and-socket action employed by Adkins is not possible in either Schwan or in Lear's Michigan steel gyros. However, if the language of Adkins' claim which requires adjustment of the bearing-receiving elements into "oriented positions" is construed to read on the Michigan steel gyros, then it also reads directly on Schwan.

If Adkins' claims are narrowly construed to cover essentially what is shown and described in the patent, *i.e.*, cooperating surfaces of specific configurations that permit orientation or angular movement in any direction when the surfaces are engaging, such as is provided by Adkin's preferred embodiment which is a sphere-in-a-cone, then the claimed invention is antici-

pated, under 35 U.S.C., Sections 101 and 102, by Sperry, Grenat and Moody.

If Adkins' claims are broadly construed to cover bearing-mounting apparatus employing supporting surfaces of "any desired configuration" (A-II. 23, Ex. 10, col. 8, lines 27-30, R.T. 304), such as the essentially flat surfaces of the Michigan steel gyros, as the California Supreme Court held (A-I. 196), the claims also read directly upon Schwan.

Moreover, Adkins' claims define a structure that differs only in minor detail from that of Herr.

Since all of the claimed elements a, b and c are shown *by the prior art* and since they cooperate to achieve alignment in the manner which would be expected in view of the prior art, Adkins' claimed invention would, within the meaning of 35 U.S.C., Section 103, be obvious to one skilled in the art.

When the scope and content of the prior art are determined, and the differences between the prior art and Adkins' claims are ascertained, as required by *Graham v. John Deere Co.* (1966), *supra,* it is clear that no differences of substance exist. They do not advance science and the useful arts, as required by the Constitutional standard.

The inevitable conclusion is that Adkins' claimed invention had been anticipated by prior art and was obvious in view of the prior art, and, as a matter of law, that the claims of Adkins' application were unpatentable and that his patent is invalid.

IV.

THE DECISION OF THE CALIFORNIA SUPREME COURT PERVERTS THE REQUISITE UNIFORMITY OF FEDERAL PATENT LAW BY REFUSING TO APPLY BASIC CRITERIA OF THAT LAW APPLICABLE IN THE ENFORCEMENT OF PATENT RIGHTS.

This Court can and should, we submit, determine that, for the reasons set forth in Section I of the Argument, the license agreement and the patent were completely unenforceable, and that in any event, for the reasons set forth in Sections II and III, the validity of Adkins' patent was properly subject to challenge, and was successfully challenged, by Lear. Either or both of such determinations will finally dispose of this litigation and will render unnecessary any consideration of the issues, to be discussed below in this Section IV, which are raised by Question Four of the Questions Presented.

The issues raised by Question Four relate to the need for application by a state court of proper basic criteria of federal patent law in the enforcement of a patent license agreement in order to have national uniformity in the federal patent law, and stem from the manner in which the California Supreme Court enforced the license agreement. That court was of the opinion that it need consider only rights emanating from the license agreement and that accordingly it need not be concerned with improprieties in the procurement of the patent, even though such improprieties would be defenses in an action for infringement (A-I. 209-210). Furthermore,

although purporting to do so, that court failed in a number of essential areas to apply basic criteria of federal patent law in determining both the scope of Adkins' patent and the further issue as to whether the claims of the patent were infringed by Lear's Michigan steel gyros.[21]

A. The California Supreme Court Erred in Refusing to Consider Any Evidence as to Improprieties in the Procurement of the Patent.

In the courts below Lear urged that certain specified improprieties in the proceedings before the Patent Office had rendered Adkins' patent unenforceable, under 35 U.S.C., Sections 102 and 132 (Br. A, *infra* 2, 4). The California Supreme Court and the Superior Court, however, erroneously refused to consider any challenge by Lear of any improprieties in those proceedings. The California Supreme Court took the view that, regardless of any such improprieties, the license agreement obligated Lear to pay royalties on products incorporating the claimed inventions of any patent which might issue under Adkins' application, regardless of how it was processed through the Patent Office (A-I. 182, 184, 209-210).

This Court, we recognize, may be reluctant to make such examination of the record as might be required in order to determine with finality the full extent of the improprieties which in fact took place. However, we do deem it proper to submit to the Court

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[21]The California Model 2156 gyro is not involved in the question of infringement because, if the patent is valid and enforceable and the agreement is enforceable, Lear, for reasons stated below, concedes infringement of the claims of the patent by that model.

for review the nature of the improprieties to which the court below erroneously refused to give any consideration whatsoever, in order to make clear the prejudicial nature of the court's error.

The principal improprieties asserted by Lear and ignored by the courts below were:

(1) The addition, by amendment, of "new matter" to the description of the apparatus contained in the original specification of the patent application;

(2) The reliance by Adkins upon such "new matter" in obtaining the allowance by the Patent Office of the subsequently-added claims of the application;

(3) The addition by Adkins of such "new matter", despite his knowledge that products incorporating the described invention had been previously sold for more than one year; and

(4) The conscious concealment by Adkins, under oath, in filings in the Patent Office, of the fact that amendments to the application included "new matter".

The court's refusal to consider these improprieties is apparent from the record (A-I. 182, 184).

(1) As to the Addition, by Amendment, of "New Matter".

The total description of the bearing-supporting apparatus that was in the original specification of Adkins' application, as filed on February 15, 1954, is set forth both in Figure 2, opposite page 52, and in the non-italicized text of Figure 5, which is opposite page 64.

The matter that was added by Adkins' amendment dated December 19, 1958 (A-II. 90-92, Ex. P, 58-60, R.T. 1328) is set forth in italics in Figure 5. Numeral references in Figure 5 show the column and line at which the related text appears in the printed patent (A-II. 18-25, Ex. 10, R.T. 304).

It is evident from Figure 5 that, of the description of the invention which appears in the printed patent, approximately one-third was added by amendment in 1958, and that the tenor of the invention was substantially changed by this addition.

As shown in the description contained in the original specification of the application, during initial adjustments a jig or cylindrical rod was to be used temporarily to support the bearings during their alignment, and the bearings were to be slid on the jig prior to mounting in their supports.[22] Hence the tenor of the invention was directed to a *method* of aligning the *bearings themselves.*

The change in tenor of the invention, as shown by the italicized text in Figure 5 (col. 7, line 67 to col. 8, line 19), consisted of the following: (a) the nature of the invention was changed from method to method and apparatus ("means"); (b) the alignment of the bearings, together with the inserts (or "bearing-receiving" elements), was changed to the alignment merely of the inserts; and (c) the bearings which were aligned were changed from bearings having no replaceability or inter-

[22]The original description stated that "during the initial adjustments a jig supports the bearings" (Figure 5, column 7, lines 38, 39); that "It is thus possible to align precisely the two bearings by means of a jig" (Figure 5, column 7, lines 45, 46); and that "The jig . . . takes the shape of a cylindrical rod upon which the bearings are slid preparatory to mounting in the supports" (Figure 5, column 7, lines 54-57).

2,919,586

GYROSCOPE

John S. Adkins, Santa Monica, Calif.

Application February 15, 1954, Serial No. 410,237

16 Claims. (Cl. 74-5.44)

This invention relates to gyroscopes and more particularly to balanced vertical flight gyroscopes or gyro vertical for use in aircraft and the like. The invention is especially addressed to a novel erecting mechanism well adapted to vertical gyroscopes, and to a novel caging system and method of assembling, applicable to gyroscopes in general.

2

A further object of the invention is to provide a novel method of aligning the various bearings in the gimbal mountings, whereby exact coaxial alignment and parallelism between opposed bearings may be achieved.

The method of insuring exact coaxial alignment and parallel spacing of the various ball bearings employed in the rotor and gimbals includes the steps of providing annular inserts having peripheral spherically shaped surface portions adapted to be seated against inner conical surfaces provided in the gimbal frames. The ball bearing races are in turn secured to these inserts and the respective surfaces positioned relative to each other with the aid of a suitable jig until the desired alignment is realized. The inserts are then secured in place either mechanically or by cementing and the aligning jig removed. The engaging spherical and conical surfaces permit the bearing race axis to be oriented in any direction during the adjusting period whereby coaxial alignment and parallelism of the bearing races may be easily effected. Other surfaces capable of being aligned and fixed in position such as a sphere in sphere, knife edges or other devices may be used without coming outside the scope of this invention, and the method may be used to align the holder for the inner or outer races, or both.

A better understanding of the various features of the present invention will be had by referring to the accompanying drawings in which:

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Figure 2 is an elevational cross-sectional view of a preferred construction of the gyroscope in which the various gimbal mountings are all co-planar for purposes of illustration;

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COPE

nta Monica, Calif.

1954, Serial No. 410,237

Cl. 74-5.44)

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7

Bearing alignment

Referring once again to Figure 2, a feature of the present invention contemplates a novel method for insuring precise coaxial alignment of the various bearings journaling the gimbal and rotor shafts. As an example, the bearings 59 and 60 shown secured to opposite sides of gimbal mounting 11 in Figure 2, must be coaxial with respect to each other and lie in parallel planes in order that the inner gimbal mounting shafts 61 will be supported for minimum bearing friction.

In accordance with the method, the inner annular surfaces 62 of the sockets in the intermediate gimbal mounting 11 are of a conical shape. The bearings 59 and 60 are in turn secured to insert elements 63 each having an annular peripheral surface 64 of the shape of a portion of a sphere, adapted to seat against the conical surface 62. During the initial adjustments, a suitable jig supports the bearings 59 and 60 and attached inserts 63. Because of the conical shape of the surface 62 and the spherical shape of the peripheral surface 64 of the inserts, the axis of each bearing may be properly oriented by a rotating motion applied to the race. This latter motion can be easily accommodated by the engaging surfaces in view of their different curved shapes. It is thus possible to align precisely the two bearings by means of a jig, at which moment the inserts 63 are secured to the gimbal mounting sockets as by cementing, welding, soldering, or by screws, for example. The aligning jig may then be removed and the assembly of the gyroscope completed. The same method may be employed for mouting the rotor 13 on the shaft S and for aligning the bearings in the outer gimbal 10 journalling the inner gimbal 11.

The jig used in aligning the bearings may be very simple and in one form takes the shape of a cylindrical rod upon which the bearings are slid preparatory to mounting in their supports. The rod is, of course, accurately formed to be round, without taper, and straight, and held to these conditions within extremely small tolerances. While such a jig requires precision work, it is comparatively simple to secure such a rod and maintain it within the required tolerances. Previously methods of construction have required the use of precision boring jigs to bore accurately aligned and concentric holes to receive the bearings, and such a jig is both difficult and expensive to fabricate, and easy to get out of adjustment.

Figure 5

The above described method and means insures that bearings are properly aligned upon being placed in the inserts, and this is so whether they are the original bearings or replacement bearings. After aligning and fixing the inserts 63 to the frame, bearings can readily be removed from and inserted therein, with complete assurance that the bearings are properly positioned when so inserted. All that is required to remove a bearing is to tap it and remove it from the insert; a new bearing is easily and

quickly installed by tapping it into the insert. The inserts, being properly aligned, initially, maintain their alignment permanently. This arrangement contrasts sharply with prior art bearing alignment means and procedures, which involve securing the outer portion of the bearing to the frame. To replace bearings in such arrangements, the connection between the bearing and frame is broken so that it can be removed. Since new bearings when positioned are not connected to the frame, the entire alignment procedure must be carried out before they can be secured in place.

Alignment of bearings as heretofore practiced involves considerable care, time and expense, and requires the services of a skilled worker. But with the bearing alignment method and means of my invention, bearings can be replaced in a minimum of time by an unskilled mechanic, and with complete assurance that the bearings, upon being inserted in the inserts 63, are completely and accurately aligned.

ADDED BY AMENDMENT DATED 12/19/58

While the use of mating conical and spherical surfaces has been mentioned, it is apparent that other similarly cooperating surfaces can be used. For example, a spherical surface can be used within another spherical surface, and other combinations can be employed. Similarly, the inner race of a bearing may be aligned with its holder, or both the inner and outer races may be aligned with their respective holders. *Further, not only may the confronting surfaces (of the inserts 63 and the walls of the openings in which they are oriented) be of any desired configuration, my invention also is not limited to the alignment of bearings of a gyroscope. My method and means for bearing alignment is applicable for insuring alignment of bearings for any rotatable device, e.g., motor shafts, etc. Further, the invention is not restricted as to the type of bearing employed; for example, it is readily suited to insure proper automatic alignment of either ball bearings or sleeve bearings.*

ADDED BY AMENDMENT DATED 12/19/58

changeability to bearings which were replaceable or interchangeable. The amendment of December 19, 1958 also broadened the description of the elements and their interrelationship. The original description of the elements (Figure 5, col. 2, lines 47-62 and col. 7, lines 32-45), consisting of "engaging or mating surfaces having a particular configuration, such as spherical and conical surfaces" (*i.e.*, the ball-and-socket arrangement of Figure 1, at p. 52), was changed by amendment to confronting surfaces of "any desired configuration" (Figure 5, col. 8, lines 29-30). In addition, the amendment broadened the field of usefulness of the apparatus, so that it was no longer limited to supporting bearings for gyros but encompassed any type of bearing for "any rotatable device" (Figure 5, col. 8, lines 33-37).

The amendment dated December 19, 1958 not merely changed the tenor of the invention by the insertion of "new matter" but also modifed the original claims of the application. None of the claims contained in the application prior to December 19, 1958 had included any reference to alignment of the inserts (or bearing-receiving elements), to the replaceability or interchangeability of the bearings, or to the interchangeable mounting of the bearings. As a result of the amendment the claims of the application, instead of calling for the bearings being in place during alignment, for the first time called for them as being inserted after alignment, and also described the supporting surfaces broadly, so that they might be of "any desired configuration".[23] Such changes clearly constituted a

[23]This amendment included the cancellation of claims 18 and 19 and the replacement of them by two new method claims numbered 27 and 28 and by a further amendment of subsequently cancelled original claim 9 (A-II. 92-93, Ex. P, 61, R.T. 1328).

change in the claimed invention and represented the addition of "new matter", contrary to the requirements of 35 U.S.C., Sections 102 and 132 (Br. A., *infra* 2, 4).

(2) Improper Reliance Upon "New Matter".

In the amendment of the application in December, 1958, Adkins attempted to distinguish the prior art relied on by the Patent Office in rejecting the claims of the application by stating that the new method claims 27 and 28, and claim 9, as amended, set forth a bearing-receiving member initially aligned or properly positioned, so that the bearings would be automatically aligned or positioned when later received thereby (A-II. 94, Ex. P, 62, R.T. 1328). In thus seeking to distinguish the references to prior art cited by the Patent Office, Adkins relied on the "new matter" which, as stated above, had been added to the description and claims of the application.

Thereafter the existing claims were cancelled and claims 29 through 41 were added by subsequent amendment. These new claims gave increased emphasis to the alignment of the inserts or bearing-receiving elements and to the replaceable bearing feature, and also to mounting and supporting surfaces of any configuration. Of these claims, claims 29 through 36 in the application became claims 9 through 16 in the patent, and they deal exclusively with the newly-contrived alignment of the bearing-receiving elements to permit replacement of the bearings.

(3) As to the Addition of "New Matter", Despite Knowledge of Its Prior Use for More Than One Year.

At the time of the amendment in December, 1958, which added the new matter described above, Lear, with the knowledge of Adkins and his counsel, had since 1955 been selling its Michigan steel gyros which included the feature of replaceable bearings or interchangeably mounted bearings. This feature had thus been in use much more than one year before it was first asserted in Adkins' patent application. Accordingly, under the one-year limitation of 35 U.S.C., Section 102, Adkins was barred and is today barred from claiming such a feature as his invention. *Muncie Gear Works, Inc. v. Outboard Marine & Mfg. Co., Inc.* (1942), 315 U.S. 759.

(4) Concealment of Fact That "New Matter" Was Added by Amendment.

At the time of the amendment of the application in December, 1958, Adkins' counsel asserted that the material added by the amendment did not constitute "new matter" (A-II. 94-95, Ex. P, 62, 63, R.T. 1328). Subsequently in two sworn statements filed with the Patent Office, Adkins falsely asserted that the subject matter of the amendment was part of his original invention as disclosed in the application when it was filed in February, 1954 (A-II. 103-105, 109-115, Ex. P, 71-73, 77-83, R.T. 1328). This submission of false oaths was in violation of 35 U.S.C., Section 115 (Br. A., *infra* 3).

The various actions of Adkins, described above in this Section IV, which the court below deemed not to be relevant, were in violation of the requirements of the patent laws and constituted serious improprieties in the proceedings before the Patent Office. They were clearly of such a nature as to make unenforceable the patent

which issued to Adkins, regardless of its validity. 35 U.S.C., Sections 102, 115 (Br. A., *infra* 2, 3); *Precision Instrument Manufacturing Company v. Automotive Maintenance Machinery Company* (1945), 324 U.S. 806. The refusal of the court below to consider the significance of such improprieties as defenses against the enforcement of Adkins' patent on the ground that such improprieties were irrelevant, constituted error, prejudicial to Lear.

By ignoring such improprieties on the ground that it was concerned only with the license agreement, the California Supreme Court has enforced a patent under an agreement despite the fact that the patent would be unenforceable in any other action, since those improprieties are defenses that are set forth in 35 U.S.C. Section 282 (Br. A., *infra* 5). Thus, a state court has enlarged patent rights beyond the limits of federal patent law. Any such enlargement cannot stand. *Sears, Roebuck & Co. v. Stiffel Co.* (1964), *supra.*

B. The California Supreme Court Erred in Refusing to Apply Basic Criteria of Federal Patent Law in Determining the Scope of the Claimed Invention and in Determining That the Invention Covered the Michigan Steel Gyros.

After determining that the license agreement had not been terminated and holding that Lear was estopped to challenge the validity of Adkins' patent, the California Supreme Court sought to determine whether the apparatus for supporting bearings in the Michigan steel gyros "infringes" the apparatus described in Adkins' patent (A-I. 194). It considered the question of infringement because of the fact that the agreement provides that royalties will be paid with respect to products manufactured and sold by Lear that incor-

porate patentable or patented inventions of Adkins.[24] (A-II. 5, 3, Ex. 8, §§3(a) and 1(d), R.T. 296). Although Lear did not raise this issue with respect to its California Model 2156 gyro, it strongly urged the court below to affirm the prior holding of the Superior Court to the effect that the apparatus for supporting bearings of Lear's Michigan steel gyros did not infringe any of the claims of Adkins' patent.

As this Court held in *Coupe v. Royer* (1895), 155 U.S. 565, any resolution of the question of infringement involves a two-step process. The first step is to determine the scope of the invention as a matter of law, and the second is to ascertain whether the alleged infringing device falls within the scope of the invention as so determined.

(1) Determination of Scope of the Claimed Invention.

In seeking, in accordance with this rule of the *Coupe* case to determine the scope of the claimed invention as a basis for ascertaining whether there was "infringement" by Lear's Michigan steel gyros, the court below, although purporting to consider the criteria of federal patent law, in fact ignored four such basic criteria.

(a) *The Court Below Went Beyond the Claims of the Application, When Read in the Light of the Specification.*

The California Supreme Court first defined Adkins' invention as a pair of bearing cups mounted in oppositely placed receiving holes by use of a mandrel (A-I. 172), and later the court used the same definition, with

[24]Of the products that Adkins asserts incorporate a patentable or patented invention, the California Model 2156 gyro admittedly is covered by the claims of Adkins' patent, since the apparatus for supporting bearings in that gyro has spherical and conical surfaces that cooperate, when engaged, to permit angular motion.

the added feature that the bearing cups are cemented into place (A-I. 193). The court erroneously assumed that the test of infringement was whether the Michigan steel gyros infringe the "apparatus described in" Adkins' patent (A-I. 194), instead of whether they infringe the claims of the patent.

Although Adkins' patent describes a method employing a mandrel or jig, the claims do not call out such features. Adkins tried to claim these features but these claims were denied (A-II. 56, 71, 93, 99-100, Ex. P, claims 7, 8, 18, 19, 27, 28, 39-41, R.T. 1328). Additionally, there is no mention in the claims or in the specification of the "receiving holes" which were employed by the court below in defining Adkins' invention.

The court below in fact did not merely fail to use the claims as the definition of Adkins' invention, but also ignored the criterion that the scope of every patent, in the first instance, is defined by the invention described in the claims contained in it, read in the light of the specification. *Motion Picture Patents Company v. Universal Film Manufacturing Company* (1917), 243 U.S. 502, 510.

As pointed out in Section III of the Argument, the main claim (claim 9) of Adkins' patent is set forth in Figure 2, opposite page 52, with the relevant portion of the original specification and the relevant figure from Adkins' patent and a schematic of the apparatus for supporting bearings based on such figure. The material added later by amendment, which is italicized in Figure 5, opposite page 64, is not included in Figure 2.

Adkins' main claim calls for "an apparatus for supporting bearings", which apparatus has three pairs of elements, viz., a pair of bearing-receiving elements (ele-

ment *a* of claim 9 in Figure 2), means for supporting said bearing-receiving elements (element *b* of claim 9 in Figure 2), and means for retaining the bearing-receiving elements in position (element *c* of claim 9 in Figure 2).

According to the claim, the bearing-receiving element (also referred to as "inserts" or bearing cups) must have a mounting surface by which it may be supported, and the supporting means must have a supporting surface cooperating with the mounting surface such that the bearing-receiving elements may be initially shifted relative to the supporting means into oriented positions.

It is seen from the portion of Adkins' original specification that relates to bearing alignment (Figure 2 of this brief) that Adkins' preferred embodiment has inserts with an outer "spherical" surface "adapted to be seated against", "engaging" or "mating" a "conical" surface provided in the gimbal or frame of the device. Thus, the description in the original specification in Adkins' patent does not provide for permissive cooperation between the surfaces, but rather a required cooperation between engaging surfaces which are in contact and have a particular configuration. The cooperation between the spherical surface and the conical surface, when engaged, is obviously a ball-and-socket[25] type of cooperation, which has the characteristic of universal action or angular tilt or orientation in any direction. This is shown on Figure 6, opposite page 72, which is the diagram employed by the Superior Court in explaining the operation of Adkins' claimed invention

[25]In the patent, the term "sockets" is applied to the area of the supporting means having the supporting surface (A-II. 23, col. 7, lines 33 and 48 of Ex. 10, R.T. 304).

in its Rulings on Lear's Motion for Judgment Notwithstanding the Verdict (A-I. 76).

The court stated in its Rulings that:

> "The asserted novelty of plaintiff's invention is the coacting relationship of a pair of surfaces, such as a ball, or a section thereof, nesting in a cone, or a combination of surfaces comprising segments of two spheres. In such a device the inner element is capable of angular movement only.
>
> "Thus, in sketch 'A' [Figure 6 of this brief], it is obvious that the only motion of the shaft A-B is the angular motion shown by a dotted line, such as C-D. No radial motion or adjustment is possible without separating the parts. To lift the ball upward in the cone so that sidewise or radial motion is possible would strip plaintiff's invention of its assigned functions and instead of practicing his invention, plaintiff would be ignoring it. To separate the parts in practice is to admit their inutility." (A-I. 76).

This construction by the Superior Court is the only proper construction of the scope of Adkins' patent that is possible when applying the criterion that, in determining the scope of an invention, the claims must be read, in the first instance, in light of the specification. If the court below had thus construed the claims of Adkins' patent, it could not have found that the claimed invention covered the Michigan steel gyros.

(b) *The Court Below Improperly Ignored the File History of the Application.*

The California Supreme Court refused to consider the history of the prosecution of Adkins' application for patent in the Patent Office, on the specious ground

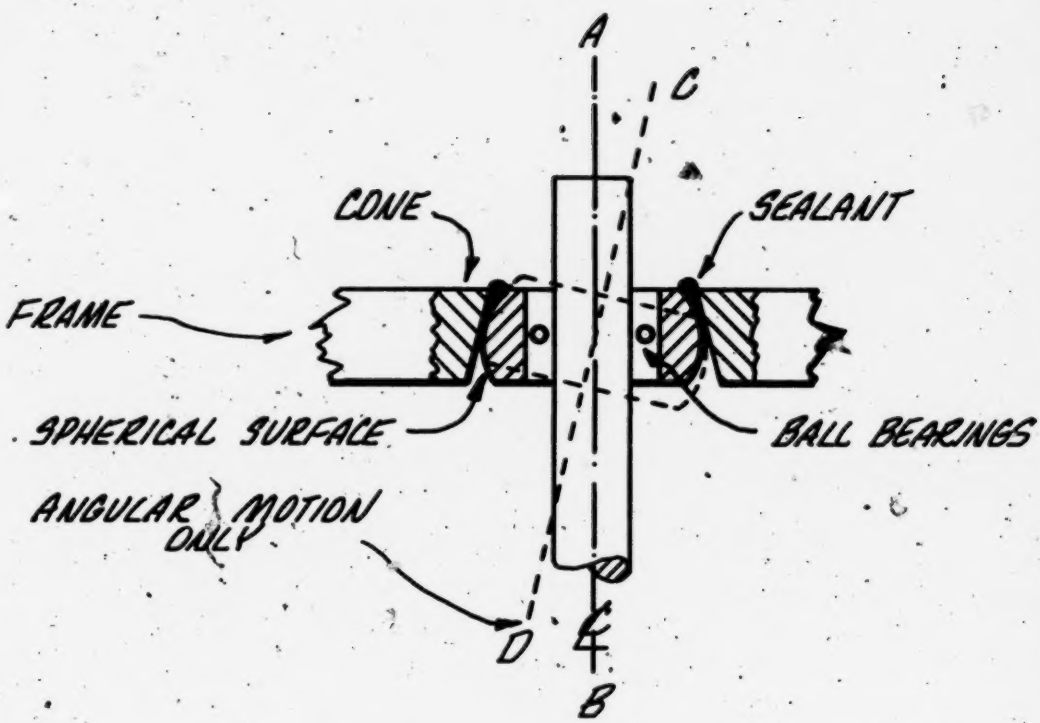

A
C
CONE
SEALANT
FRAME
SPHERICAL SURFACE
BALL BEARINGS
ANGULAR MOTION ONLY
D
B
PLAINTIFF'S DEVICE "A"

Figure 6

that the claims at issue had not been previously rejected and thus had not been limited by Adkins as the result of a prior rejection (A-I. 196-197). The court thus ignored the criteria enunciated by this Court in *Schriber-Schroth Co. v. Cleveland Trust Co.* (1940), 311 U.S. 211, 218, 221, as follows:

> "Where the patentee in the course of his application in the patent office has, by amendment cancelled or surrendered claims, those which are allowed are to be read in the light of those abandoned and an abandoned claim cannot be revived and restored to the patent by reading it by construction into the claims which are allowed. . . .
>
> "The patentee may not, by resort to the doctrine of equivalents, give to an allowed claim a scope which it might have had without the amendments, the cancellation of which amounts to a disclaimer."

Adkins' application had been pending for more than five years when the claims which appear in the patent were inserted in the application by amendment. Nineteen other claims directed to bearing alignment had previously been urged by Adkins. All nineteen had been rejected by the Patent Office in view of prior art, and had been cancelled and abandoned by Adkins in view of the rejection by the Patent Office. These had included numerous claims directed to the method of assembly (A-II. 56, 71, 93, 99-100, Ex. P, claims 7, 8, 18, 19, 27, 28, 39-41, R.T. 1328). The method of assembly employing a mandrel ("jig" or "rod"), which is described in the specification of Adkins' patent and which Adkins attempted to claim as part of his invention, was placed in the public domain when Adkins' patent issued

without claims directed to such method. *McClain v. Ortmayer* (1891), 141 U.S. 419. Nevertheless, the court below erroneously ruled that the scope of Adkin's invention included the use of a mandrel for alignment, and therefore necessarily included a procedure or method of assembly. The court stated:

> ". . . The device of cemented-in bearing cups using a mandrel procedure constitutes the essence of Adkins' invention, as described in his application." (A-I. 191).

If the California Supreme Court had considered the file history, it could not have concluded that "using a mandrel procedure" constitutes the essence of Adkins' invention.

Similarly, throughout its opinion the California Supreme Court refers to "receiving holes" as being part of Adkins' invention (A-I. 172, 173, 193, 194, 195, 196, 197). Adkins' application, as shown in Figure 2, opposite page 52, contains no such definition. Furthermore, claims of sufficient scope to include "receiving holes" were denied Adkins, by reason of the rejection and cancellation of claims 22 through 27 and the limitation of specific surfaces that cooperate, which appears in the broadest claim (claim 9) that Adkins was allowed (A-II. 81-85, 96, Ex. P, 49-53, 64, R.T. 1328). By thus ignoring the file history of Adkins' application, the court below again failed to apply basic federal criteria in determining the scope of the claimed invention. Only by so doing was the court able to find that the claimed invention covered the Michigan steel gyros.

(c) *The Court Below Improperly Relied on "New Matter" Added to the Specification.*

The California Supreme Court, in determining the scope of Adkins' claimed invention, relied upon language inserted in the specification by the amendment dated December 19, 1958 which was filed on December 22, 1958 (A-II. 90-92, Ex. P, 58-60, R.T. 1328), three years after the first sale of the Michigan steel gyros in 1955 (Ex. 35, R.T. 503), and almost five years after the filing of the application. The court construed the license agreement to cover any patent which issued; and since a patent did issue, the court was of the opinion that it need not consider whether or not "new matter" was added by the 1958 amendment (A-I. 184-185). Thus, the court found that the patented apparatus fell within the scope of the initial application, without ascertaining what was added to the description by amendment and without considering the file history (A-I. 197).

It was pointed out in Part A of this Section that the addition of "new matter" by the amendment to the application dated December 19, 1958, constituted a basic irregularity, which should have been held to render Adkins' patent unenforceable. However, the court below not only ignored the fact that the impropriety involved in the addition of "new matter" constituted a defense to Lear, but, on the contrary, in contravention of the purposes and provisions of the patent law, relied on that very "new matter" in broadening the scope of the claimed invention.

The addition of "new matter," the reliance upon such added material by the state court in determining the scope of the invention, and the changing of the scope of

the claimed invention by amendment are in direct derogation of the federal patent laws. 35 U.S.C., Section 132 (Br. A., *infra* 4); *Muncie Gear Works, Inc. v. Outboard Marine & Mfg. Co., Inc.* (1942), *supra.*

(d) *The Court Below Erroneously Employed a New Principle of Construction of a Patent, Which Is That the Scope of the Invention Encompasses All Similar Apparatus for Achieving the Same Results Unless Such Apparatus Is Expressly Excluded by Specific Language.*

The California Supreme Court stated: "It is obvious that the literal language of claim 9 and the specifications . . . intend to cover within the scope of the invention receiving holes and bearing cups having mating surfaces of any configuration . . . unless expressly excluded by other specific language" (A-I. 196). This is a new principle of construction which has not received judicial recognition heretofore, and it runs counter to the criterion that specifications can be used to limit but never to expand claims, *McClain v. Ortmayer* (1891), 141 U.S. 419, 424.

This new principle of construction also runs counter to the basic principle that the invention of a patent cannot cover prior art. *Graham v. John Deere Co.*, (1966), *supra.*

Furthermore, this new principle is directly contrary to the doctrine of equivalents, purportedly relied upon by the court below. As shown under Section III of the Argument, if the flat supporting surfaces of the Michigan steel gyros (Figure 3, on page 54) are determined to be the equivalents of the ball-and-socket supporting surfaces of Adkins' patent (Figure 2, op-

posite page 52), the patent encompasses prior art, shown by the flat supporting surfaces of the Schwan patent (A-II. 121, Ex. A-31, R.T. 1147). Hence, prior art precluded any application of the doctrine of equivalents whereby the Michigan steel gyros would be brought within the scope of Adkins' patent.

Furthermore, if the "new matter" improperly added to the description of the specification is ignored, the doctrine of equivalents calls for a restriction of the claims of Adkins' patent to the device disclosed by the original specification and equivalents thereof. *Graver Tank & Manufacturing Company, Inc. v. Linde Air Products* (1950), 339 U.S. 605. When so applied, that doctrine restricts Adkins' claimed invention to apparatus for supporting bearings which has surfaces that are not flat, where one of the surfaces is adapted to seat against the other so that they are engaging or mating, thus permitting alignment by angular tilt only. The flat surfaces of the supporting bearings of the Michigan steel gyros could not possibly meet this compelling restriction of the doctrine of equivalents.

Thus, although the court below gave lip-service to the doctrine of equivalents, it in fact so distorted the application of the doctrine as to improperly broaden the scope of Adkins' claimed invention, to the prejudice of the petitioner and in clear contravention of established criteria employed in patent enforcement.

(2) Determination of Whether the Claimed Invention, When Properly Construed, Covers Lear's Michigan Steel Gyros.

The California Supreme Court construed Adkins' patent to cover "a pair of bearing cups which are positioned with use of a mandrel into oppositely placed re-

ceiving holes in a frame or gimbal, and cemented into place" (A-I. 193). However, as discussed at pages 72-74 above, this construction relies upon the use of a mandrel, which is in the public domain and which is not set forth in any claim of the patent.

The remaining part of the invention, in accordance with the construction by the court below, is a pair of bearing cups located in oppositely placed receiving holes in a frame and cemented into place. However, these features are shown by almost all of the prior art patents in evidence, such as the Schwan patent (A-II. 121, Ex. A-31, R.T. 1147), when arrangements for securing the bearing cups in place other than cement are taken as equivalents, which they obviously are, since the patent states that other mechanical arrangements are equivalent.

As discussed at pages 69-77 above, the scope of Adkins patent must be ascertained by interpreting the language of the claims in the light of what is actually described in the application, and in the light of the file history. Such construction must not encompass the prior art, because that would render the claims invalid.

Since the California Supreme Court erred by not applying the proper criteria in determining the scope of the claimed invention, the question of coverage of the Michigan steel gyros must be decided anew. The ruling by the Superior Court that the Michigan steel gyros could not be the subject of a valid patent to anyone, and that therefore Adkins "cannot claim them as equivalents under or as infringing his patent", must be reviewed. The question of coverage is a pure question of law, since no dispute exists as to the nature of Lear's Michigan steel gyros and since the apparatus for sup-

porting bearings therein need only be compared with the apparatus for supporting bearings of the claims of Adkins' patent, construed as a matter of law in view of the specification, file history, and prior art.

The same subject as that covered by Adkins' patent, *i.e.*, bearing alignment, was before this Court in the case of *Singer Mfg. Co. v. Cramer* (1904), 192 U.S. 265. There the Court found as a matter of law that there was no infringement and that the lower court should have directed a verdict for the defendant. Similarly, as a matter of law in this case, there is no infringement of the claims of Adkins' patent by Lear's Michigan steel gyros.

The Michigan steel gyros have apparatus for supporting bearings that is illustrated in Figure 3, on page 54. Such apparatus was shown in detail in Lear drawing SH1040 (Ex. O, R.T. 920), along with a description of the procedure to be followed in carrying out the method of assembly, and is shown in Figure 7, opposite page 80.

In accordance with the method of assembly described in Figure 7, the bearing-receiving elements, *i.e.*, bearing cups (shown in red), are affixed to opposite ends of the alignment fixture (also called mandrel, tool, jig or rod) by two screws and two clamping washers, and the bearing cups of necessity assume the alignment of the tool. Once the cups are placed on the mandrel, they are aligned; and no movement relative to the axis of the mandrel is possible or necessary as a matter of simple mechanics.

The gimbal halves are assembled around the alignment fixture so that the aligned bearing cups (shown in red) partially extend through oversize holes in the

gimbal frame. At one end of the gimbal frame (shown in yellow) the flat surface of the flange of the bearing cup engages the flat surface of the gimbal where it is supported. At the other end of the gimbal frame the flat surface of the flange of the bearing cup usually does not engage the adjacent surface of the gimbal because some end play is provided for ease in assembly (See procedure note 9 on Figure 7).

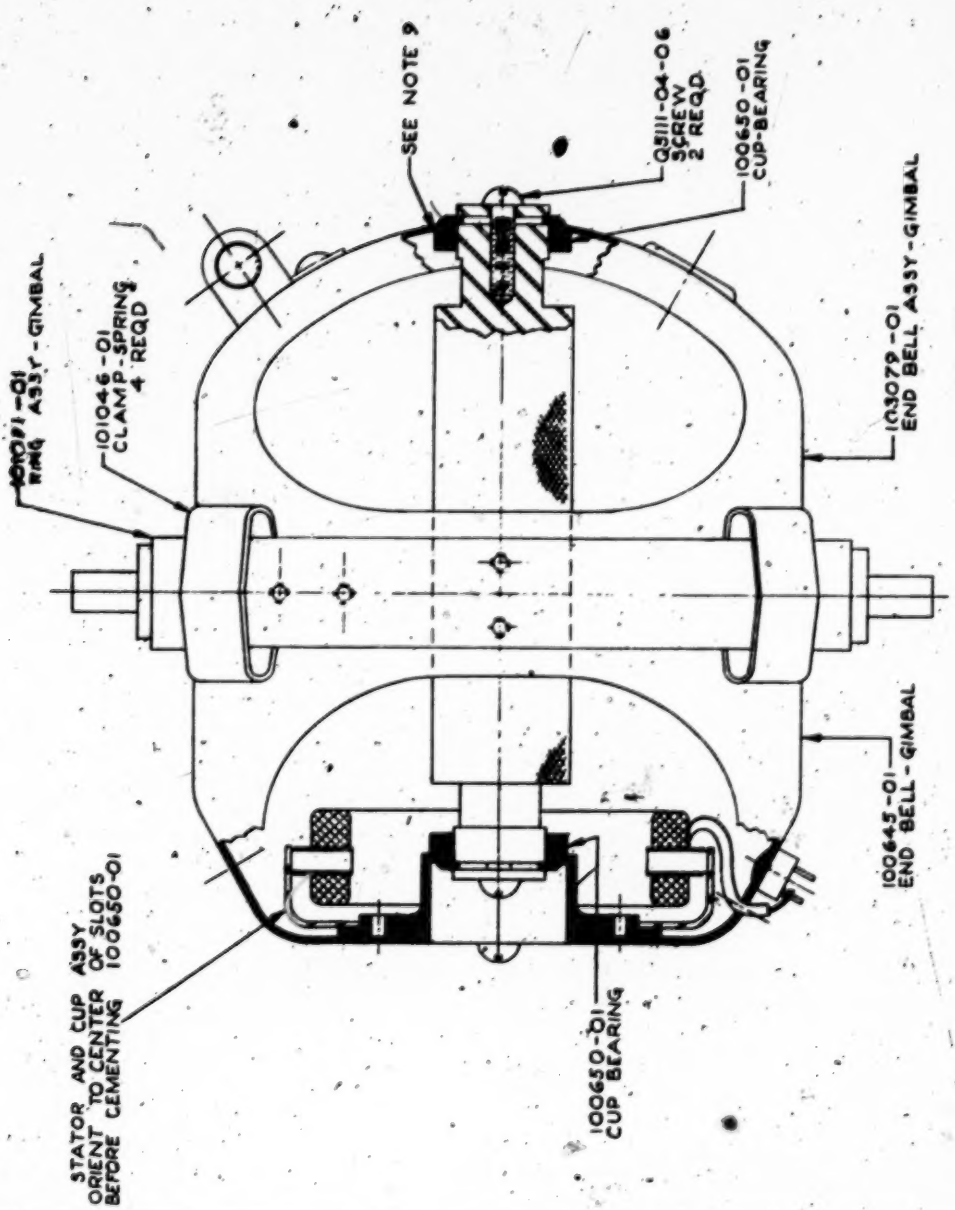
After the apparatus is thus assembled, the cement, used as a holding means, is cured so as to permanently affix the cups to the gimbal. After the cement is cured by baking, the alignment fixture is removed. Bearings may then be placed in the bearing cups and the other components of the gyro are then assembled to make a complete device.

The Superior Court, after applying the basic criteria discussed at pages 69-77 above, found no infringement and also found no equivalents (A-I. 75-82). The scope of Adkins' claimed invention, as determined by the Superior Court during the trial, was such that Lear's Michigan steel gyros could not possibly infringe the claims of Adkins' patent.[26] The court instructed the jury that Adkins' patent described and its claims covered bearing supports which provide only angular or universal motion, and that the Michigan steel gyros have bearing supports of a different structure (R. T. 3108). The court also instructed the jury that Adkins' patent did not disclose any use of an oversize hole such

[26]At the end of the trial during the discussion of jury instructions the trial judge stated "I do not see how as a matter of law, interpretation, logic or mechanics you can see any similarity in the Adkins device (i.e., the patented device) and the Michigan device (i.e., the steel gyros)." (Parenthetical material added.) (R. T. 2596.)

PROCEDURE:

1. ASSEMBLE CUPS (PART NO. 100650-01) ON ALIGNMENT FIXTURE AND CLAMP USING WASHERS SHOWN AND 4-40 SCREWS.
2. ASSEMBLE OUTER AXIS PARTS AROUND THE FIXTURE AND CUPS AS SHOWN.
3. CEMENT CUPS IN PLACE AS SHOWN USING 102079-01 CASTING RESIN.
4. USE CASTING RESIN IN 4 PLACES DESIGNATED "AREA A" AND ADD INDEX MARKS AS SHOWN.
5. BAKE ASSEMBLY 1 HOUR AT 200° F.
6. REMOVE CLAMPING WASHERS AND CHECK FREEDOM OF ALIGNMENT FIXTURE WITH STATOR AND CUP ASSEMBLY AT EXTREME SLOT POSITIONS.
7. DISASSEMBLE AS FOLLOWS:
   A. SET GIMBAL CLAMPS PER SECTION Z-Z AND REMOVE ALIGNING FIXTURE.
   B. REPLACE END BELL AND RESET CLAMPS.
8. STOCK THESE ITEMS AS MATCHED AND SERIAL NUMBERED SETS UNTIL USED TO COMPLETE THE OUTER GIMBAL AXIS ASSEMBLY.
9. END PLAY BETWEEN ASSEMBLIES TO BE HELD AT THIS LOCATION DURING CEMENT APPLICATION AND CURING.



PROCEDURE:

1. ASSEMBLE CUPS (PART NO. 100650-01) ON ALIGNMENT FIXTURE AND CLAMP USING WASHERS SHOWN AND 4-40 SCREWS.
2. ASSEMBLE OUTER AXIS PARTS AROUND THE FIXTURE AND CUPS AS SHOWN.
3. CEMENT CUPS IN PLACE AS SHOWN USING 102079-01 CASTING RESIN.
4. USE CASTING RESIN IN 4 PLACES DESIGNATED "AREA A" AND ADD INDEX MARKS AS SHOWN.
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   A. SET GIMBAL CLAMPS PER SECTION Z-Z AND REMOVE ALIGNING FIXTURE.
   B. REPLACE END BELL AND RESET CLAMPS.
8. STOCK THESE ITEMS AS MATCHED AND SERIAL NUMBERED SETS UNTIL USED TO COMPLETE THE OUTER GIMBAL AXIS ASSEMBLY.
9. END PLAY BETWEEN ASSEMBLIES TO BE HELD AT THIS LOCATION DURING CEMENT APPLICATION AND CURING.

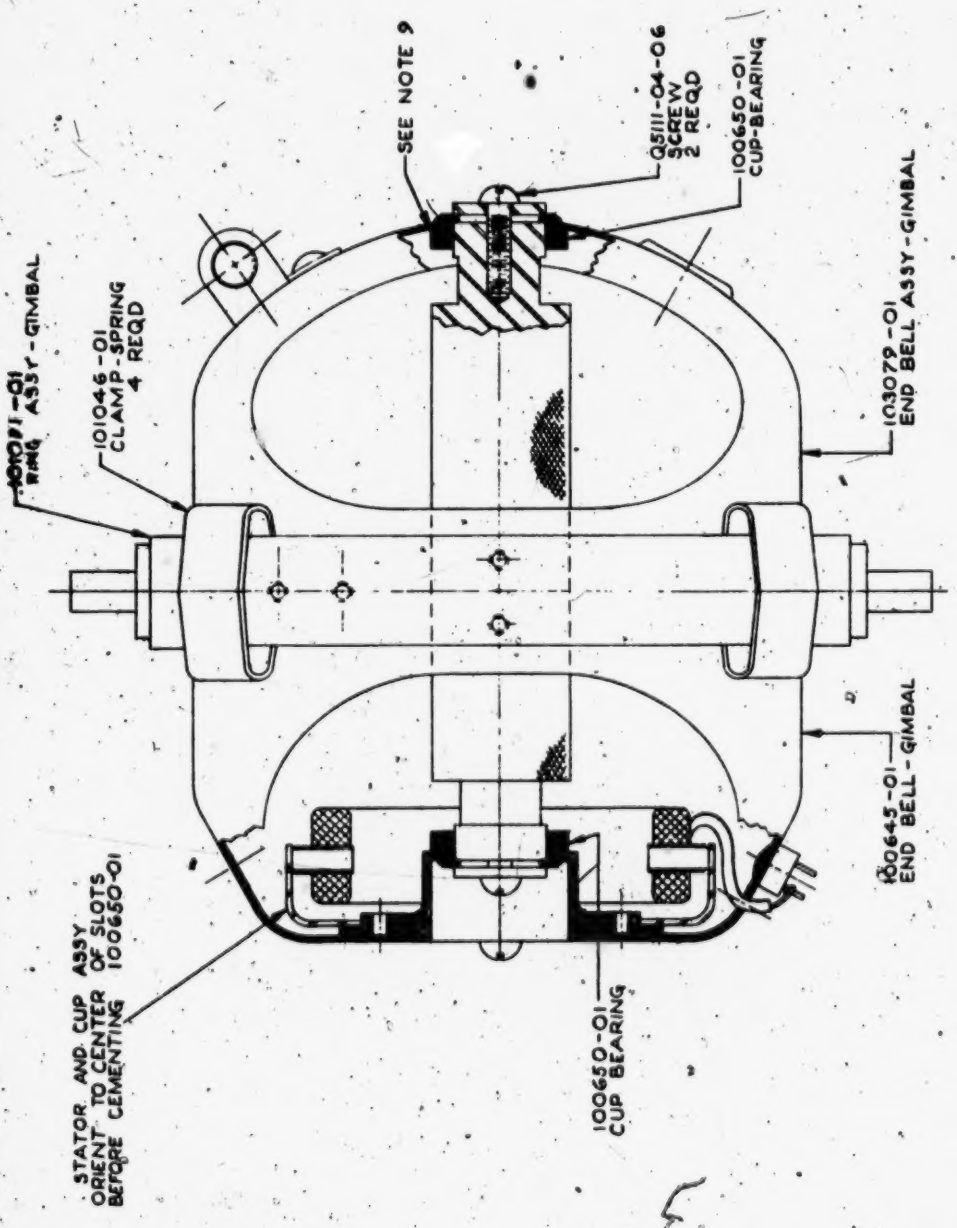
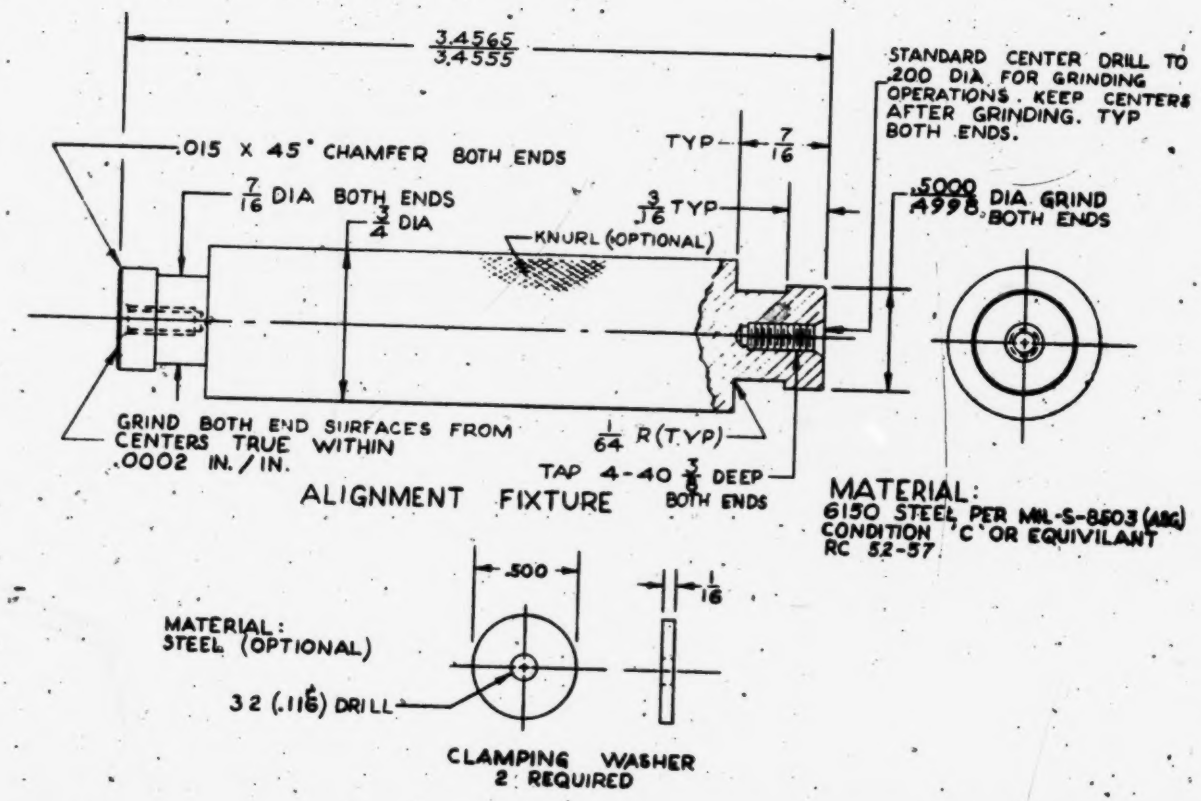


Figure 7.


3.4565
3.4555
STANDARD CENTER DRILL TO .200 DIA FOR GRINDING OPERATIONS. KEEP CENTERS AFTER GRINDING. TYP BOTH ENDS.
.015 X 45° CHAMFER BOTH ENDS
TYP 7/16
7/16 DIA BOTH ENDS
3/4 DIA
3/16 TYP
.5000
.4998 DIA GRIND BOTH ENDS
KNURL (OPTIONAL)
GRIND BOTH END SURFACES FROM CENTERS TRUE WITHIN .0002 IN./IN.
1/64 R (TYP)
TAP 4-40 3/8 DEEP BOTH ENDS
ALIGNMENT FIXTURE
MATERIAL:
6150 STEEL PER MIL-S-8503 (ASG) CONDITION 'C' OR EQUIVILANT RC 52-57
.500
1/16
MATERIAL:
STEEL (OPTIONAL)
32 (.116) DRILL
CLAMPING WASHER
2 REQUIRED

as employed in the Michigan steel gyro bearing mount (R. T. 3162). The court later ruled, as a matter of law, in granting Lear's motion for judgment notwithstanding the verdict, that the Michigan steel gyros did not infringe Adkins' patent (A-I. 82).

In the ball-and-socket arrangement (Figure 1, on page 52) disclosed and claimed by Adkins, alignment of the bearings is achieved by angular or universal motion of the bearings and the bearing cups in their sockets, as recognized by the Superior Court. Although the California Supreme Court also recognized that the alignment of the bearing cups in Adkins' patent is achieved by angular motion, it erroneously stated that this is equally applicable to the Michigan steel gyros.

As shown in Figure 7, the bearing cups are rigidly affixed to the alignment fixture (mandrel) and "angular displacement of the cups to the same axis; that is, the axis of the mandrel" (A-I. 198) is physically impossible in the Michigan steel gyros, despite the ruling otherwise by the California Supreme Court.

Thus, as a simple matter of mechanics, logic and law the Michigan steel gyros do not infringe the claims of Adkins' patent, which require angular adjustment of the bearing cups for alignment.

Since the question whether Lear's Michigan gyros fall within the scope of Adkins' claimed invention may be resolved as a matter of law, it is deemed appropriate to invite this Court to consider this issue. This question need be reached only if, notwithstanding our arguments to the contrary, the Court should hold that the agreement is enforceable and the patent is valid and enforceable.

Conclusion.

Petitioner respectfully requests this Court to reverse the judgment of the California Supreme Court and to direct that court to enter judgment for petitioner on the grounds that:

(1) The license agreement between petitioner and respondent as well as the patent issued to respondent are unenforceable, because the agreement constitutes a misuse of the licensed patent;

(2) Petitioner, as licensee, is not estopped to contest the patentability of the claims of respondent's patent application or the validity of the patent issued to him, and the claims of the respondent's patent application are unpatentable and the patent issued to him is invalid; and

(3) Petitioner's Michigan steel gyros do not infringe the claims of respondent's patent.

If, however, this Court is of the opinion that further proceedings are required in the court below, petitioner respectfully requests that the Court reverse the judgment of the California Supreme Court, and direct that court in such proceedings:

(1) To review, under applicable criteria of federal patent law, as specified by the Court in its opinion, the determination of the Superior Court as to the unpatentability of the claims of respondent's application and the invalidity of the patent issued to respondent;

(2) To review the evidence in the record as to improprieties in the proceedings before the Patent Office, and, in the event of a finding that the improprieties asserted herein occurred in such pro-

ceedings, to determine that the patent, and consequently the license agreement, are unenforceable; and

(3) On the basis of applicable criteria of federal patent law, as specified by the Court in its opinion, that must be applied in ascertaining the scope of a claimed invention and the infringement thereof, to re-determine the scope of the claims of respondent's patent and the further question whether petitioner's Michigan steel gyros infringe those claims.

Respectfully submitted,

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Dated: July 25, 1968.

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In the Supreme Court of the United States

OCTOBER TERM, 1968

No. 56

LEAR, INCORPORATED, PETITIONER

v.

ADKINS

ON WRIT OF CERTIORARI TO THE SUPREME COURT OF CALIFORNIA

BRIEF FOR THE UNITED STATES AS AMICUS CURIAE

OPINIONS BELOW

The opinion of the Supreme Court of California (A–I* 164–215) is reported at 67 C. 2d 882, 435 P.2d 321. The opinion of the District Court of Appeals (A–I 121–158) is reported at 244 A.C.A. 100, (a modification is noted at 244 A.C.A. 563), as modified, 52 Cal. Rept. 795. The opinion of the Superior Court (A–I 74–82) is not reported officially, but is reported unofficially at 143 U.S.P.Q. 53.

JURISDICTION

The judgment of the Supreme Court of California was entered on December 14, 1967 (A–I 164), and a timely petition for rehearing was denied on January 11, 1968 (A–I 217). The petition for a writ of

*A–I refers to Volume I of the Appendix.

certiorari was filed on April 9, 1968, and was granted on May 20, 1968, 391 U.S. 912.

QUESTION PRESENTED

The United States will discuss the following question, which fairly is comprehended within Question 1 of the petition:

Whether the State law doctrine that a licensee under a patent license is estopped from challenging the validity of the patent is valid in view of the policies and objectives of the federal patent and antitrust laws.

INTEREST OF THE UNITED STATES

The effect of the application of the doctrine of patent licensee estoppel by the court below is to enforce the respondent's patent monopoly regardless of whether it meets the federal standard of patentability. This judgment, if allowed to stand, will substantially increase the procurement cost to the United States of defense items manufactured by the petitioner for the government. But the government's primary concern here transcends immediate fiscal considerations. This case presents important issues of public policy regarding the availability in private patent litigation of defenses based on invalidity of patents. There is a significant public interest in enabling private litigants to invoke the power of the courts to relieve the channels of commerce of the anticompetitive burden of invalid patent monopolies. The importance of this issue to the national economy and to the proper functioning of the federal patent system has led the United States to file this brief *amicus curiae*.

STATEMENT

The relevant facts are set out in the opinion of the California Supreme Court (A–I 164–215). Petitioner Lear employed respondent Adkins between 1951 and 1958 to develop and improve gyroscopes (devices used in aircraft navigation, hereinafter "gyros"). In 1955 Adkins granted Lear a license (A–I 12–33) to use the invention claimed in a then-pending patent application relating both to methods and to apparatus for mounting and aligning gyros in bearings (A–I 167, 172, 174).

Lear manufactured two types of devices embodying Adkins' alleged invention, "2156 gyros" and "steel gyros", and paid him royalties on both products until 1957. In March 1957 the Patent Office rejected all of Adkins' claims on the basis of a prior patent. Lear then advised Adkins that it had concluded that its "steel gyros" did not come within the scope of the patent application, and that thereafter it would pay Adkins royalties only on the "2156 gyros" (A–I 176). Adkins continued to prosecute the application, however, abandoning his method claims and substituting new apparatus claims. The latter were finally allowed by the Patent Office in 1960. In 1959, however, Lear notified Adkins that it was terminating the license and would no longer pay him any royalties on the "2156 gyros" (A–I 176–177). Since that time Lear has continued to manufacture both models of gyro, but has paid Adkins no royalties thereon (A–I 177).

Adkins filed this suit for royalties in a California court in 1960, on the day the patent was issued. The

trial court directed a $16,000 verdict for Adkins on the "2156 gyros," holding that Lear was estopped from contesting the validity of the patent (A–I 74). The jury returned a verdict on the "steel gyros" for $888,000. The trial court set aside this verdict, however, holding that the estoppel doctrine did not apply to this phase of the case (A–I 75). It then ruled that Adkins' alleged invention was anticipated by, and was obvious in the light of, the prior art, as was the allegedly infringing "steel gyro" (A–I 77–81). In the latter connection, the trial court said (A–I 81):

> Defendant's "Michigan" device ["steel gyro"] represents even less of an advance over the prior art than plaintiff's. The teachings of Schwan and Moody are so obvious that little further need be said to dispose of the matter. It is sufficient to point out that a dunderhead * * * would come up with precisely the device manufactured by Lear.

On appeal, the intermediate appellate court[1] ruled that it had been the intention of the parties, in the 1955 agreement, to make royalties payable only on patentable inventions (A–I 133–134). The court reasoned that since Lear gave Adkins notice of termination of the license in 1959, at a time when the Patent Office had refused to allow any claims to Adkins, the termination was effective and Lear had no further obligation under the license (A–I 137). In the

[1] Respondent states that under California law the grant of a hearing by the State Supreme Court rendered the opinion of the intermediate appellate court a nullity for all purposes (Br. in Opp., p. 16, n. 6).

court's view, Lear's effective termination of the license made the doctrine of estoppel thereafter inapplicable under California law (A–I 138–139). And since the license had been effectively terminated, Adkins was deemed to have no cause of action thereunder for acts after 1959, but was "relegated to an action for infringement" in the federal courts (A–I 141). An alternative theor yof recovery based on Lear's alleged unjust enrichment was rejected on the authority of *Sears, Roebuck & Co.* v. *Stiffel Co.*, 376 U.S. 225 (A–I 142–143). The case was remanded, however, for trial on the amount of damages to be awarded for production of the "steel gyros" prior to termination of the license.

On further appeal, the California Supreme Court reinstated both the $888,000 award on the "steel gyros" and the $16,000 award on the "2156 gyros". It ruled, first, that the 1959 termination was not effective, in the light of the intention of the parties reflected in their agreement, as construed under State law, and that Lear, therefore, was liable under the license when it refused to pay royalties. The court also held that "the doctrine of licensee estoppel is applicable and Lear is foreclosed from challenging the validity of Adkins' patent" (A–I 191). In addition, the court found that the prior art did not anticipate the claims of Adkins' patent (A–I 200–202), and that Lear's steel gyros infringed the patent (A–I 199). Accordingly, Lear was held liable for damages (1) on the "steel gyros" since 1957, when it had incorrectly concluded that such gyros fell outside the Adkins invention, and (2) on the "2156 gyros"

since 1959, when it had ineffectively attempted to terminate the contract.[2]

SUMMARY OF ARGUMENT

This case presents an appropriate occasion for re-examination by this Court of the validity of the State law doctrine of patent licensee estoppel. Although this Court upheld the doctrine in *Automatic Radio Co.* v. *Hazeltine, Inc.*, 339 U.S. 827, that aspect of the *Hazeltine* decision is conspicuously inconsistent with the premises underlying important decisions of this Court both preceding and following *Hazeltine*.

A basic policy of the federal patent and antitrust laws is to foster free competition in unpatented and unpatentable products. As an important corollary in achieving this objective, federal policy favors the exposure of invalid patent monopolies before the courts in order to free the public from their economic effects. On several occasions, this Court has held that particular applications of the doctrine of patent licensee estoppel are forbidden under federal law because they interfere with these fundamental federal patent and antitrust policies.

Recent decisions of this Court have further clarified these policies of federal law and strongly indicate that the entire doctrine of patent licensee estoppel

[2] Under the decision below, Lear cannot effectively terminate the contract without discontinuing manufacture of the gyros. If it were to do so, it would disrupt certain Department of Defense procurement arrangements. We are informed by that Department that the cost of Lear's future contractual liabilities to Adkins will probably be passed on, in substantial part, to the United States under applicable procurement regulations. See 32 C.F.R. § 15.205–36.

conflicts therewith. Unqualified rejection of the doctrine by this Court would appropriately vindicate these important federal policies and would not impair any substantial interest of the States.

ARGUMENT

One of the most effective safeguards of the public interest in maintaining the integrity of the patent system is the ability of private litigants to raise the invalidity of patents as a defense, thereby ridding the channels of commerce of the clogs on competition created by invalid patent monopolies. The State law doctrine of licensee estoppel has long obstructed and interfered with this safeguard. On several occasions in the past, the United States has unsuccessfully urged this Court to eliminate the doctrine. See Briefs for the United States as *Amicus Curiae* in *Katzinger Co.* v. *Chicago Mfg. Co.*, 329 U.S. 394; *MacGregor* v. *Westinghouse Co.*, 329 U.S. 402; *Automatic Radio Co.* v. *Hazeltine, Inc.*, 339 U.S. 827. In light of the recent decisions of this Court in *Sears, Roebuck & Co.* v. *Stiffel Co.*, 376 U.S. 225, and *Compco Corp.* v. *Day-Brite Lighting, Inc.*, 376 U.S. 234, concerning the relationship between State law doctrines which forbade the copying of unpatented articles and the federal patent laws, it is now appropriate for this Court fundamentally to re-examine the State rule of patent licensee estoppel, and to hold it impermissible because it is inconsistent with, and repugnant to, federal patent and antitrust policy.

The present case presents an appropriate occasion for such a re-examination. The highest court of the

State squarely held that "the doctrine of licensee estoppel is applicable" (A–I 191). Reversal of that holding would be dispositive of the case in this Court and would be a judgment addressed to the issue inherent in the litigation which is of the most fundamental and general importance. This Court need not be deterred from reaching this issue by the fact that the petitioner's contentions in the State courts were directed primarily to attempting to carve out an exception to the doctrine rather than to its overturn. Because of this Court's decision upholding the doctrine in *Automatic Radio Co.* v. *Hazeltine, Inc.*, 339 U.S. 827, it would have been futile for the petitioner to argue broadly to the State courts that federal law bars the States from applying the doctrine of patent licensee estoppel. It is the province of this Court, and not of the State courts, to re-examine the premises of the *Hazeltine* decision; and it is appropriate to do so in a case, such as this one, in which the explicit holding of the court below is unavoidably dependent upon the continuing validity of that decision.

Moreover, the facts of the present case graphically illustrate the need for re-examination of the permissibility under federal law of the doctrine of patent licensee estoppel. The respondent has been awarded, over and above the normal salary he was paid by the petitioner for his professional services (see Reply Br. of Petitioner in Support of Petition, p. 3), a judgment for royalties totaling $904,000. In addition, he can anticipate several million dollars of future royalty payments under the license (see *supra*, n. 2). Such payments are undeniably warranted under the patent

system if the respondent has in fact contributed, by means of a patentable invention, to the economic activities that are generating this return. But if he has not made such a contribution because the patent is specious, the payments represent only an unjustified exaction upon the work and investment of large numbers of other persons whose economic efforts are producing the income from which these royalties are derived. Because of the doctrine of licensee estoppel, the respondent is being allowed to exact this tribute even if his patent is invalid. Of course, when it is possible to do so, the ultimate cost of such payments will be passed along through the economy to be borne by the consumer, who is not even a party to the license agreement. This, too, is strikingly illustrated by the present case, in which the cost of future royalty payments will largely be borne by the Treasury, and taxpayers, of the United States (see *supra*, n. 2).

I. THE PATENT LICENSEE ESTOPPEL DOCTRINE THWARTS THE FEDERAL POLICY OF ASSURING THE PUBLIC OF FREE AND OPEN COMPETITION IN UNPATENTABLE PRODUCTS

The potential litigants who are the most likely to combine the requisite knowledge and incentive to challenge invalid patents are barred by the doctrine of licensee estoppel from relieving the public of the economic burden of unlawful patent monopolies.[3] Such monopolies obstruct the public interest objectives that the patent system was designed to encourage, includ-

[3] See *Automatic Radio Co.* v. *Hazeltine, Inc.*, 339 U.S. 827, 840 (dissenting opinion of Mr. Justice Douglas); cf. *Katzinger Co.* v. *Chicago Mfg. Co.*, 329 U.S. 394, 400–401.

ing the careful limitation of patent monopolies so as to permit the maximum exploitation of science and the useful arts. This public interest is dominant over any private concern.[4] It is advanced by ridding the economy of invalid patents, and it is hindered by any obstacles thereto.[5] Because the doctrine of licensee estoppel is such an obstacle, it is inconsistent with fundamental policies of the federal patent and antitrust laws. While it is true that a majority of this Court upheld the doctrine in *Automatic Radio Co.* v. *Hazeltine, Inc.*, 339 U.S. 827, 836, we shall show that that aspect of *Hazeltine* constituted a departure from the premises underlying important decisions of this Court which preceded *Hazeltine*, and is even more plainly inconsistent with this Court's holdings in more recent cases. In these circumstances, we submit that re-examination by this Court of that aspect of the *Hazeltine* decision is both warranted and needed.

A. THE POLICY OF THE FEDERAL PATENT AND ANTITRUST LAWS IS TO GUARANTEE FREE AND OPEN COMPETITION IN UNPATENTED AND UNPATENTABLE PRODUCTS

The Patent Clause of the Constitution authorizes Congress "To promote the Progress of Science and useful Arts, by securing for limited Times to * * * Inventors the exclusive Right to their respective * * * Discoveries" (Art. I, § 8, cl. 8). By its terms, the

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[4] *Pennock* v. *Dialogue*, 2 Pet. 1; see authorities collected in *Mercoid Corp.* v. *Mid-Continent Inv. Co.*, 320 U.S. 661, 665. See, also, *Precision Instrument Mfg. Co.* v. *Automotive Co.*, 324 U.S. 806, 815–816.

[5] See *Aero Co.* v. *B. G. Corp.*, 130 F. 2d 290, 294 (C.A. 2) (Frank, J., concurring: "An invalid patent masquerading as a valid one is a public menace * * *.").

Clause allows the grant of exclusive right only for original creative contributions. In giving effect to the Patent Clause, Congress has authorized the grant of a patent only to one who invents or discovers a new and useful product or process (35 U.S.C. § 101), and it has prohibited such grants where the alleged invention has been known or used by another in the past (35 U.S.C. § 102) or would have been obvious to a person having ordinary skill in the art involved (35 U.S.C. § 103).

The decisions of this Court have made it clear that the "clause is both a grant of power and a limitation" (*Graham* v. *John Deere Co.*, 383 U.S. 1, 5). The Court has compared the Patent Clause with the Statute of Monopolies,[6] which both authorized the grant of limited monopolies to true and first inventors of new manufactures and at the same time prohibited the grant of monopolies over goods or businesses which had previously been enjoyed by the public (*ibid.*; *Sears, Roebuck & Co.* v. *Stiffel Co.*, 376 U.S. 225, 229). Because of these dual policies of the patent system, neither Congress nor any State may, consistently with the Constitution, grant product monopolies which "remove existent knowledge from the public domain, or * * * restrict free access to materials already available" (*John Deere*, 383 U.S. at 6; see *Stiffel*, 376 U.S. at 231).

In order to protect these policies and objectives of the patent system, the Court has recently rejected, under the Supremacy Clause, decisions imposing liability under State law for the copying of an un-

[6] 21 Jac. I, c. 3 (1623).

patentable article. *Sears, Roebuck & Co.* v. *Stiffel Co.*, 376 U.S. 225; *Compco Corp.* v. *Day-Brite Lighting, Inc.*, 376 U.S. 234. The Court held that "[t]o allow a State by use of its law of unfair competition to prevent the copying of an article which represents too slight an advance to be patented would be to permit the State to block off from the public something which federal law has said belongs to the public" (*id.*, at 231–232).

B. FEDERAL POLICY FAVORS INVALIDATION OF WORTHLESS PATENTS

In furtherance of the federal policy of free and open competition in unpatented and unpatentable products, "public policy favors the exposure of invalid patent monopolies before the courts in order to free the public from their effects." *United States* v. *Singer Mfg. Co.*, 374 U.S. 174, 200 (concurring opinion of Mr. Justice White). This principle has been recognized, implicitly, in the many decisions of this Court, culminating in *Graham* v. *John Deere Co., supra*, requiring the maintenance of the high, Constitutional standard of invention, lest "the heavy hand of tribute be laid on each slight technological advance in an art" (*Cuno Engineering Corp.* v. *Automatic Devices Corp.*, 314 U.S. 84, 92).

The principle has also been recognized explicitly in a context very close to that of the present case. In *Pope Mfg. Co.* v. *Gormully*, 144 U.S. 224, a patentee sued to obtain specific performance of a patent licensing agreement in which the licensee promised that it would not, during the life of the licensed patents, dispute the validity of the licensor's title to certain other

patents and that, if the licensee used any such patents following termination of the license, the licensor might treat him as an infringer and obtain an injunction against him without notice.[1] The Court said, "The real question is whether the defendant can estop himself from disputing patents which may be wholly void" (144 U.S. at 233). Noting that it "is as important to the public that competition should not be repressed by worthless patents, as that the patentee of a really valuable invention should be protected in his monopoly * * *" (*id.*, at 234), the Court held that the agreement was so oppressive that a court of equity would not enforce it (*id.*, at 236–237). The Court also indicated that the estoppel provisions of the contract were void, as contrary to public policy (*id.* at 236). In so holding, it said that "it is a serious question whether public policy permits a man to barter away beforehand his right to defend unjust actions or classes of actions" (*id.*, at 234), and quoted with approval the statement in *Crane* v. *French*, 38 Miss. 503, that the right to make a defense may be one which (*id.*, at 234–235)

> is not only a private right to the individual, but * * * is founded on public policy which is promoted by his making the defence, and contravened by his refusal to make it. * * * With regard to all such matters of public policy, it would seem that no man can bind himself *by estoppel* not to assert a right which the law gives him on reasons of public policy.

[1] The patentee sought an injunction and an accounting; he did not seek damages.

Today, *Gormully* plainly means that patent license agreements that prevent challenge to patents contravene public policy. The distinction carefully made there between an action in equity and one at law can no longer be regarded as significant. See *Katzinger Co.* v. *Chicago Mfg. Co.*, 329 U.S. 394, 399–400; cf. *Barrows* v. *Jackson*, 346 U.S. 249, 254.

More recent authorities similarly recognize that there is a strong public policy favoring legal invalidation of unlawful patents, lest "competition * * * be repressed by worthless patents" (*Gormully, supra*). Thus, in *Sinclair Co.* v. *Interchemical Corp.*, 325 U.S. 327, 330, this Court admonished the lower federal courts trying infringement suits to pass upon the validity of patents, even where they deemed the defendant's product non-infringing, because "of the two questions, validity has the greater public importance." See, also, *Muncie Gear Co.* v. *Outboard Co.*, 315 U.S. 759, 768. Earlier, in *Haughey* v. *Lee*, 151 U.S. 282, 285, the Court had found "no merit in the proposition" that an infringer should be estopped from challenging the validity of a patent because of his own, unsuccessful efforts to procure the same patent, stating: "[T]he defence of want of patentable invention in a patent operates not merely to exonerate the defendant, but to relieve the public from an asserted monopoly * * *." Accord, *Paramount Corp.* v. *American Tri-Ergon Corp.*, 294 U.S. 464, 477.

C. THE DOCTRINE OF LICENSEE ESTOPPEL IS AN OBSTACLE TO THE ACHIEVEMENT OF THESE POLICIES

Under the doctrine of licensee estoppel, a licensee may not challenge the validity of his licensor's patent, at least during the term of and within the scope of the license agreement.[8] In the case at bar, although the trial court found that Adkins' alleged invention was obvious in light of the prior art (a finding not disturbed on appeal), the petitioner was nevertheless "estopped" by its license from utilizing that invalidity to defeat the respondent's claim for damages. Thus, assuming that under federal law respondent's devices represent too slight an advance to be patented, or that they are already in the public domain, the State rule applied here blocks the public from two substantial benefits: (1) petitioner's demonstration that the monopoly seemingly conferred by the patent is invalid; and (2) petitioner's free use of a technology

[8] It is common practice to place an express no-contest clause in the license (as in the *Katzinger* case, *supra*; cf. *United States* v. *Singer Mfg. Co.*, 374 U.S. 174, 180, 199), but the distinction between the express and implied promise not to challenge validity has been deemed immaterial (*Katzinger*, 329 U.S. at 401–402; see *Scott Paper Co.* v. *Marcalus Co.*, 326 U.S. 249, 255–256).

The estoppel rule has at times been stated in terms of suits for royalties due under the contract (see *Automatic Radio Co.* v. *Hazeltine, Inc.*, 339 U.S. 827, 836), but the doctrine has also been invoked in infringement suits and actions for a declaratory judgment of invalidity (see *Katzinger Co.* v. *Chicago Mfg. Co.*, 329 U.S. 394; *MacGregor* v. *Westinghouse Co.*, 329 U.S. 402; *Scott Paper Co.* v. *Marcalus Co.*, 326 U.S. 249 (assignor estoppel)).

which, under federal law, belongs to all members of the public.[9]

This Court has recognized the importance to the public of preventing even a single manufacturer from being blocked off from the field engrossed by an invalid patent.[10] *Scott Paper Co.* v. *Marcalus Co.*, 326 U.S. 249. In *Scott Paper*, the assignee of a patent sued its assignor for manufacturing an allegedly infringing device. The assignor defended on the ground that its machine was simply a copy of an expired prior art patent. The trial court held that since the assignor was estopped by its own assignment from showing the patent's invalidity (*Westinghouse Co.* v. *Formica Co.*, 266 U.S. 342, 349), it could not accomplish the same result indirectly by using the prior art to show noninfringement. The court of appeals, also relying on *Formica*, ruled that the estoppel doctrine did not bar the assignor from using prior art to narrow the claims of the patent, even to the point of eliminating them entirely. This Court cut through the formalistic distinctions of the two lower court opinions and held the estoppel doctrine to be completely inapplicable for the simple reason that foreclosure of the assignor from use of the prior art is inconsistent with federal patent laws which dedicate such matter to public use. The Court said that the aim of the patent laws is not only that the public shall be free

[9] Lear is a leading competitor in the production of instruments of this type. The Department of Defense has advised us that Lear is its only source for procurement of certain of these gyros, and is the leader among the four suppliers of others.

[10] Cf. *Klor's, Inc.* v. *Broadway-Hale Stores, Inc.*, 359 U.S. 207, 213.

to manufacture the subject matter of an expired patent, "but also that the consuming public at large shall receive the benefits of the unrestricted exploitation, by others, of [such] disclosures" (326 U.S. at 255). The effect of permitting a manufacturer, whether by express contract or by "estoppel," to preclude himself from using the invention of an expired patent would run directly counter to this policy.

Frequently, the enforcement of a public policy depends upon persons who will, in protection of their own interests, also assert the public's rights. See, *e.g.*, *Barrows* v. *Jackson*, 346 U.S. 249. Private enforcement of the antitrust laws is an important element in protecting the public interest in competition. See, *e.g.*, *Kiefer-Stewart Co.* v. *Seagram & Sons*, 340 U.S. 211; *Simpson* v. *Union Oil Co.*, 377 U.S. 13. Equally important is private protection of the patent system by means of the defense that a technology is already in the public domain. *Scott Paper Co.* v. *Marcalus Co.*, *supra*. The widest possible availability of such a defense by private persons is especially needed in a patent system, such as ours, in which patent monopolies are granted in essentially *ex parte*, non-adversary administrative proceedings. This Court has "often indicated the inappropriateness of invoking broad common-law barriers to relief where a private suit serves important public purposes." *Perma Life Mufflers, Inc.* v. *International Parts Corp.*, No. 733, O.T. 1967, decided June 10, 1968, slip op. p. 4. The licensee estoppel doctrine is such a barrier.

II. THE TREND OF THIS COURT'S RECENT DECISIONS HAS BEEN TOWARD ABOLITION OF THE PATENT LICENSEE ESTOPPEL DOCTRINE AND THERE IS NO COUNTERVAILING JUSTIFICATION FOR ITS RETENTION

1. The recent decisions of this Court dealing with patent estoppel emphasize "the necessity of protecting our competitive economy by keeping open the way for interested persons to challenge the validity of patents which might be shown to be invalid * * *" (*Katzinger Co.* v. *Chicago Mfg. Co.*, 329 U.S. 394, 400). Thus they return to the principle of *Pope Mfg. Co.* v. *Gormully, supra,* 144 U.S. at 235, that "the right to challenge 'is not only a private right to the individual, but it is founded on public policy which is promoted by his making the defence, and contravened by his refusal to make it' " (329 U.S. at 400–401).

Some of the earlier cases, it is true, departed from the approach of *Gormully.* But they did so without discussion of the rule of estoppel, which was not even questioned by counsel (see *Sola Electric Co.* v. *Jefferson Co.*, 317 U.S. 173, 175). Moreover, they turned upon the "particular circumstances there involved" (*Katzinger Co.* v. *Chicago Mfg. Co., supra,* at 399). Thus the estoppel doctrine slipped into our law almost unnoticed, often on the basis of casual dicta.

For example, *Kinsman* v. *Parkhurst,* 18 How. 289, was a pre-Sherman Act case involving a partnership agreement between a patentee and his assignee to produce the patented product and divide the profits. The Court held only that the alleged invalidity of the

patent was immaterial to the assignee's duty under the agreement to account for the proceeds.

United States v. *Harvey Steel Co.*, 196 U.S. 310, involved a government contract for use of a patented armor plate process which contained a clause providing for termination of royalty payments if the patent was held to be invalid. When sued for disputed royalties, the government attacked the patent. On appeal, government counsel did not refer this Court to *Pope* v. *Gormully*, and did not challenge the general validity of the licensee estoppel doctrine. Instead they accepted the doctrine, arguing only that it was inapplicable to user-licensees as distinguished from licensees who sold the product. This Court rejected the purported distinction and held that under the explicit language of the contract clause the government could set up the invalidity of the patent as a defense only upon a prior showing of invalidity by a third party. There was no discussion—as there had been in *Gormully*—of the public policy implications of the estoppel doctrine. Moreover, under the license agreement in *Harvey Steel*, royalties were payable as consideration not only for the use of the patent, but for the use of related trade secrets that were communicated and that went beyond the patent. In fact, the Court found it unnecessary to decide whether the patent itself had been infringed, because of the admitted use of a process based upon these "communications of the claimant * * *" (196 U.S. at 319).

Any validity which the licensee estoppel doctrine had derived from *Kinsman* and *Harvey Steel* was completely eroded by the more recent patent estoppel

cases in this Court. In *Sola Electric Co.* v. *Jefferson Co., supra,* the Court held that a license agreement containing a pricefixing clause did not bar the licensee from challenging the clause by showing that the patent is invalid and that the price restriction was accordingly unlawful under the Sherman Act because not protected by the patent monopoly.[11] The Court emphasized that "local rules of estoppel will not be permitted to thwart the purposes of statutes of the United States." 317 U.S. at 176.

As noted above (pp. 16–17), in *Scott Paper Co.* v. *Marcalus, supra,* the Court held that the assignor of a patent cannot be estopped from defending an infringement suit on the ground that the patent has expired.[12] It observed (326 U.S. at 256–257):

> They [the patent laws] do not contemplate that anyone by contract or any form of private arrangement may withhold from the public the use of an invention for which the public has paid by its grant of a monopoly and which has been appropriated to the use of all. The rights in the invention are then no longer subject to private barter, sale, or waiver. [Citations omitted.] It follows that the patent laws preclude the petitioner assignee from invoking the doctrine of estoppel * * * and they

[11] See *United States* v. *General Electric Co.*, 272 U.S. 476; *United States* v. *Gypsum Co.*, 333 U.S. 364, 386–387. In a case in which this Court was evenly divided, the government recently challenged the continuing validity of *General Electric's* authorization of price-fixing clauses in patent license agreements. See *United States* v. *Huck Mfg. Co.*, 382 U.S. 197.

[12] The dissenting opinion of Mr. Justice Frankfurter in *Marcalus* argued that the effect of the Court's decision was to abolish assignor estoppel.

> preclude the assignor from estopping himself from enjoying rights which it is the policy of the patent laws to free from all restrictions. For no more than private contract can estoppel be the means of successfully avoiding the requirements of legislation enacted for the protection of a public interest.

Sola Electric and *Scott Paper* were followed in *Katzinger* v. *Chicago Mfg. Co., supra,* which also involved a license containing a pricefixing clause and in which it was thus unnecessary to decide whether the doctrine of licensee estoppel must be rejected in its entirety. However, the Court emphasized the dominant public interest in permitting challenges to the validity of patents. 329 U.S. at 400–401. Accord, *MacGregor* v. *Westinghouse Co.,* 329 U.S. 402; *United States* v. *Gypsum Co.,* 333 U.S. 364, 387.

The only contrary authority in recent years is *Automatic Radio Co.* v. *Hazeltine, Inc., supra.* The principal issues in that case involved questions of alleged patent misuse. After dealing with those issues in detail, the Court simply noted that, "The general rule is that the licensee under a patent license agreement may not challenge the validity of the licensed patent in a suit for royalties due under the contract" (339 U.S. at 836). Application of the estoppel rule was upheld because the licenses involved did not, it was said, contain provisions in direct conflict with the antitrust laws. But this aspect of the *Hazeltine* opinion does not rest on a considered articulation of policies or analysis of precedents. By contrast, the dissenting Justices, in an opinion which has grown in persuasiveness,

undertook such an analysis (339 U.S. at 838–840) and observed (339 U.S. at 840):

> The licensee protects the public interest in exposing invalid or expired patents and freeing the public of their toll. He should be allowed that privilege. He would be allowed it were the public interest considered the dominant one. Ridding the public of stale or specious patents is one way of serving the end of the progress of science.

In merely reciting the "general rule" of licensee estoppel, the Court in *Hazeltine* did not focus on the critical question of the relationship between State and federal law in evaluating the issue of the permissibility of patent licensee estoppel. Analysis of that critical relationship was an important feature of this Court's leading opinion in this field, *Sola Electric Co.* v. *Jefferson Co., supra,* 317 U.S. at 176–177. More recently, this Court very significantly returned to the teaching of *Sola Electric* in *Sears, Roebuck & Co. v. Stiffel Co.,* 376 U.S. 225, and *Compco Corp.* v. *Day-Brite Lighting, Inc.,* 376 U.S. 234. Fundamental considerations of federal patent and antitrust policy led the Court in those cases to strike down State "use of its law of unfair competition to prevent the copying of an article which represents too slight an advance to be patented" because the States would thereby be giving "protection of a kind that clashes with the objectives of the federal patent laws" (376 U.S. at 231–232).

Enforcement of invalid patent monopolies, by means of the State doctrine of licensee estoppel, likewise

"clashes with the objectives of the federal patent laws" and must yield to the supremacy of federal policies. To the extent that *Hazeltine* held to the contrary, it should be overruled as conspicuously inconsistent with the premises underlying decisions both preceding and following it—from *Gormully* and *Sola Electric*, through *Scott Paper*, *Katzinger*, *McGregor* and *Gypsum*, to *Stiffel*, *Compco*, *John Deere* and *Perma Life Mufflers*. The logic of these decisions can lead to no other result, as one member of this Court recently recognized (*United States* v. *Singer Mfg. Co.*, 374 U.S. 174, 200) (concurring opinion of Mr. Justice White):

> In the "patent estoppel" cases, the Court found that public policy favors the exposure of invalid patent monopolies before the courts in order to free the public from their effects. Thus a licensee may not be prevented from attacking the validity of his licensor's patent.

2. Recognition that the estoppel doctrine conflicts with, and must yield to, federal law is facilitated by the fact that countervailing policies of State law favoring perpetuation of the doctrine are not substantial. Cf. *Southern Pacific Co.* v. *Arizona*, 325 U.S. 761, 775–779, 783–784. The patentee is not a victim of unfair dealing merely because his licensee challenges the patent.[13] A non-exclusive license, such as

[13] Rejection of the doctrine of patent licensee estoppel would leave unimpaired the general State doctrines of equitable estoppel and promissory estoppel, which are distinguishable from licensee estoppel. The doctrine of equitable estoppel is that one is not permitted to deny something which by his culpable silence or misrepresentation he has led another to

the present one (see A–I 158), does not require the licensor to forego granting licenses to, and collecting royalties from, others. His royalties represent full compensation for the patentee's agreement not to sue. If the royalties cease, he may sue either on the contract (as respondent elected to do in this case) or for infringement under the damage provisions of the patent code (35 U.S.C. 284). But if the patent is in fact invalid, neither the licensor nor anyone else should be permitted to enjoy the monopoly it confers or to tax the economy therewith. The licensee should be permitted to show the facts.

It might be argued that, from the standpoint of fair dealing, additional considerations may be present in cases involving exclusive licenses and patent assignments. In the case of an exclusive license it can be claimed that the patentee gave up other licenses or business arrangements; and in the case of a patent assignment it may be said that it is unfair for the assignor to purport to sell a valuable patent right and then, if the assignee should challenge the assignor's unlicensed post-assignment use of the patent, to claim that what was sold is worthless. But if the patent is

---

believe, if the other has acted upon that belief. "The doctrine always presupposes error on one side and fault or fraud upon the other" (*Morgan* v. *Railroad Co.*, 96 U.S. 716, 720). A promissory estoppel occurs only when one party's statement to the other induces him to change his position and act substantially to his prejudice in consequence of the inducement (*Jones* v. *United States*, 96 U.S. 24, 29; Restatement, *Contracts* § 90). By contrast, the question involved here is the appropriateness of a rule of estoppel where there has been neither fraud or falsehood on the one hand, nor reliance or injury on the other.

in fact invalid, the "license conferred no right, for the licensors had none to confer" (*Saxton* v. *Dodge*, 57 Barb. (N.Y.) 84, 113).

Perhaps, as a matter of state equity doctrine, an exclusive licensee who successfully challenges his licensor's patent might nevertheless be required to account for the benefits of exclusivity he enjoyed prior to the time the patent was declared invalid. And an assignor, who successfully challenges a patent he assigned, might be required to return the consideration he received for the assignment. Similarly, in cases where one party or the other had substantial reason to believe that the patent was invalid at the time of the license or assignment, and failed to disclose this fact to the other party, special damages might be appropriate. So long as such remedies do not conflict with federal patent or antitrust policy, these considerations are matters of state concern in adjusting the private rights between parties.[14] But the estoppel doctrine's bar against challenges to the validity of patents directly interferes, in any of these cases, with the federal interest in protecting the economy from unlawful monopolies. The States must be restricted, in this field, to remedies which can be reconciled with the federal patent and antitrust laws. The States' "interest in private good faith is not a universal touchstone which can be made the means of sacrificing a public interest secured by an appropriate exercise of the

[14] Cf. *Perma Life Mufflers* v. *International Parts Corp.*, *supra*, in which the Court held that although the *pari delicto* defense could not bar liability for violating the antitrust laws, the plaintiff's conduct can "be taken into consideration in computing damages * * *" (slip op., p. 6).

legislative power." *Scott Paper Co.* v. *Marcalus, supra,* 326 U.S. at 257.

CONCLUSION

For the foregoing reasons, the judgment of the Supreme Court of California should be reversed and the case remanded for that court to consider petitioner's challenge to the validity of the patent.[15]

Respectfully submitted.

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AUGUST 1968.

[15] The relief here requested is appropriate to the contention on the merits made in this brief. Although this brief has been confined to a single issue, the government does not thereby intimate agreement or disagreement with the petitioner's additional contentions on the merits or related requests for further relief.

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IN THE

Supreme Court of the United States

October Term, 1968
No. 56

LEAR, INCORPORATED,
Petitioner,

vs.

JOHN S. ADKINS,
Respondent.

On Writ of Certiorari to the Supreme Court of California.

BRIEF FOR RESPONDENT.

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IN THE

Supreme Court of the United States

October Term, 1968
No. 56

LEAR, INCORPORATED,

Petitioner,

vs.

JOHN S. ADKINS,

Respondent.

On Writ of Certiorari to the Supreme Court of California.

BRIEF FOR RESPONDENT.

Questions Presented.

Separately, fully and fairly stated in terms of the record in this case, Lear raises not four but the following fourteen questions, some of which Lear first presented in its petition for a writ of certiorari, some of which Lear first presents herein, and some of which arise from the questions Lear presented as necessarily included subsidiary questions in order to decide fully the entire question. In restating the questions in its brief, Lear has rearranged the order in which the questions were originally presented and has combined different and unrelated questions. Consequently, we will herein separately restate the questions and reserve for full consideration (Point I, *infra*) the new order in which the questions are presented and show therein that no sub-

stantial Federal question was timely raised, as a result of which the writ of certiorari should be dismissed as improvidently granted.

1. Whether any substantial Federal question was properly raised in the California courts in order to confer jurisdiction on this Court under 28 USC §1257(3). (Point I, *infra.*)

2. Whether the California Supreme Court's construction of paragraphs 2(a) and 3(g) of the license agreement, holding that Lear cannot terminate the agreement while continuously using Adkins' invention in its gyros, violates either the patent laws or the anti-trust laws or constitutes a misuse of the patent which renders the license unenforceable. (Point IIA, *infra.*)

3. Whether an agreement to pay a royalty for the disclosure of an idea, discovery and invention which happens also to be the subject of a secret patent application and which is cancellable if no patent is issued, constitutes a retroactive misuse of the patent grant under either the patent laws or the anti-trust laws which renders the license unenforceable. (Point II B, *infra.*)

4. Whether, absent any misuse of the patent, the settled doctrine of licensee estoppel, which is necessary to give the patent grant substance and value, encourages licensing and the use of the patent system, and on which inventors rely, conflicts with the policy of either the patent laws or the anti-trust laws, thereby permitting a licensee to question validity. (Points III A, B, C & D, *infra.*)

5. Whether, if the doctrine of licensee estoppel does not violate either the patent laws or the anti-trust

laws, a licensee may nevertheless always repudiate and stand out from under the license agreement and then contest the validity of the patent in order to attempt to show a total failure of consideration. (Point III F, *infra.*)

6. Whether a licensee who bargains not for any particular claims of the application, but, rather, for the right to use the invention disclosed in the specifications of the application and then for issued claims which cover the invention may, under the agreement, assert that no claims could issue and challenge the "patentability" of the invention. (Point III E, *infra.*)

7. Whether the doctrine of licensee estoppel should be or is any different where the license is initially under a patent application and then shifts to a license under the claims of the issued patent when the licensee can always show that the issued claims do not cover the invention of the application and/or the invention of the license agreement. (Point III G, *infra.*)

8. If a licensee is not estopped to question the validity of his licensor's patent and the patent is held to be invalid, what is the proper cut-off date for accrued royalties. (Point IV, *infra.*)

9. Whether additional language inserted in the specifications is "new matter," and, if so, whether the inclusion of new matter without any proof of intent either to misrepresent or conceal, constitutes fraud on the Patent Office precluding recovery of royalties due under a license agreement where no claim is based on any alleged new matter. (Point V B, *infra.*)

10. Whether the California Supreme Court, after correctly stating the rule for construction of claims, incorrectly read any part of the cancelled method claims into the issued apparatus claims. (Point VI, C, *infra.*)

11. Whether the California Supreme Court, after properly stating the doctrine of file wrapper estoppel, correctly applied it to the facts in this case. (Point VI B, *infra.*)

12. Whether, where the jury finds that the patent is valid, this Court should reconsider every factual and legal issue relating to validity, or remand the case to the highest State court which has not squarely considered the issue of validity. (Point V A, *infra.*)

13. Whether, where the jury finds that the patent is infringed by the accused devices based on uncontradicted expert testimony, this Court should essay an independent determination of the documentary evidence and the testimony relating to mechanical functioning of the patented device, the prior art devices and the accused devices. (Point VI A, *infra.*)

14. Whether, if the agreement fails because the patent is invalid, or the agreement is otherwise unenforceable, this case must be remanded for a trial on the alternative second cause of action for misappropriation in breach of confidence, breach of implied-in-fact contract and unjust enrichment, which was dismissed as moot. (Point VII, *infra.*)

Introductory Statement.

This case is a suit for breach of contract brought by John S. Adkins ("Adkins"), an individual inventor, against Lear, Incorporated, a major corporation,* which involves only one patented invention (used exclusively by Lear) and only one license agreement.

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*According to Fortune's Directory of the 500 largest U.S. corporations, Lear-Siegler ranked 213 last year (up from 309 in 1966) on sales of $402,303,000.00.

Adkins originally went to work for Lear on January 2, 1952 for a nominal salary far below that which his position and experience would normally command, in the hope that he could develop a more accurate and less costly gyroscope (hereinafter "gyro") bearing alignment structure and license it to Lear. Before joining Lear, Adkins and William P. Lear, on behalf of Lear, entered into a one-page letter agreement dated December 29, 1951, under which Adkins agreed to disclose to Lear all of his "ideas, discoveries and inventions" relating to gyros, and Lear agreed to pay to Adkins therefor a "mutually satisfactory royalty." This letter agreement, which is of extreme importance to the issue of licensee estoppel, is totally ignored by both Lear and the Government. The importance to Lear of having a more accurate and lower cost gyro cannot be overestimated. Both Adkins and Lear were well aware that the advent of the jet aircraft rendered obsolete the gyros which Lear and other members of the gyro industry were then producing and created an urgent industry-wide need for a more accurate, low-cost gyro, with the reward going to the company which could first manufacture such a gyro. Thus, Mr. Lear, who knew of Adkins' broad experience in the gyro field, gave him a free hand to attempt to create a more accurate, low-cost gyro, his reward to be the "mutually satisfactory royalty." After considerable experimentation and in mid-1952, Adkins successfully solved the problem which had long baffled the gyro industry by inventing a new apparatus for precise bearing alignment which resulted in a much more accurate gyro which was cheaper to manufacture. Adkins immediately disclosed his invention to Lear and Lear began using it in its gyro products, first in the 2156 gyro and then, approximately one

year later and in October of 1953, in its steel gyros. In February of 1954 Adkins filed a patent application on his invention, and on September 15, 1955 Adkins and Lear entered into the license agreement here in suit. The license agreement cancelled the letter agreement and required Lear to pay Adkins a royalty of 1¼% if it used his invention. As will be seen (Point III, *infra*), although the agreement was couched in terms of a formal patent license agreement, conclusive validity of the patent played no part in the bargain.

It appears that the primary question involved in this case, and the only question on which the Government has filed an *amicus* brief, is whether or not the settled doctrine of licensee estoppel is necessary to enforce the bargain of the parties and is vital to effectuate the policy of the patent clause and the purpose of the patent laws, or is aberrational in view of the policy of the anti-trust laws. Although both Lear and the Government step outside the record to show that Adkins' invention is used primarily by the military and that the public bears the burden of the royalty and will continue to do so, the countervailing considerations are ignored. To the extent that gyros using Adkins' invention are sold to the military, they are presumably sold pursuant to competitive bidding regulations, as well as the Renegotation Act, which are designed to insure that only a fair price is paid by the military. Although great emphasis is placed on the substantial amount of money which Adkins will receive, neither Lear nor the Government is willing to recognize the many millions of dollars that the military is saving by having a gyro which costs substantially less to make, and even more important, the fact that the military is receiving a gyro

which, because it uses Adkins' invention, meets the accuracy requirements which are essential in gyros used in jet aircraft. Similarly, both Lear and the Government ignore the many hundreds of millions of dollars which Lear is receiving from sales of this gyro and the fact that its profit is far in excess of the 1¼% it is required to pay to Adkins—a profit it would not have in the first place but for Adkins' invention.*

Thus, the real questions presented by the licensee estoppel issue are as follows:

1. Is Adkins now to be told that the doctrine of estoppel to question validity, upon which he relied when he agreed to the cancellation of the letter agreement and entered into the license agreement, violates the anti-trust laws, and that Lear can now contest validity and perhaps deprive him of all royalties, when conclusive validity of the patent was then and is now irrelevant to the bargain?

2. If so, is Adkins now also to be told that twelve jurors who found his patent to be valid, and seven California Supreme Court justices who found his invention to be a "significant step forward," were wrong, and that one trial judge (who did not understand either Adkins' invention, the prior art devices or the steel gyros) (see Points V and VI, *infra*) was right?

3. If so, is Adkins now to be told that Lear may keep the accrued royalties which it has al-

*These facts alone may explain the statement in the Government's brief (fn. 9, p. 16) that "Lear is the leading competitor in the production of instruments of this type. The Department of Defense has advised us that Lear is the only source for procurement of certain of these gyros . . ."

ready collected from its customers and the profits which it has received from the sale of these gyros, and also to be told that Lear may continue to amass these profits without paying him the agreed royalty?*

Statement of the Material Facts.

On December 29, 1951 Adkins and William P. Lear for Lear, Incorporated, signed a simple one-page letter agreement**[1] which provided that all of Adkins' "ideas, discoveries and inventions" relating to gyros would be Adkins' "property" which Adkins agreed to disclose to and license to Lear in exchange for a "mutually satisfactory royalty." Pursuant to that agreement, and on January 2, 1952,[2] Adkins began work, for a nominal salary of $650.00 per month, which was below that normally paid to employees holding similar positions, and which Mr. Lear described as "coffee and cake money,"[3] at Lear's research and development facility in Santa Monica, California,[4] to develop a gyro which would be more accurate than those then being manufactured by Lear and which could be produced at a lower cost.[5] Thus, Adkins' real reward was to depend

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*If the doctrine of licensee estoppel and/or the related issues (Nos. 1-7, *supra*) are in fact the only issues of concern in this Court, then all of the questions dealing with validity, infringement, the proper cut-off date for royalties if the patent is invalid, and the necessity for a trial of the second cause of action (Nos. 8-14, *supra*), which are discussed at pages 84-145, need not be considered by this Court.

**All references to the record herein set forth in numbered footnotes use Lear's abbreviated form.

[1]Ex. 7 for identification, A-I, 11, C. T. B-7 [R. T. 293, 296].

[2]R. T. 291.

[3]Dep. 194.

[4]R. T. 298, 2142.

[5]Ex. 7 for identification. See fn. 1.

on his success, for which he would be paid a "mutually satisfactory royalty."

Lear was a manufacturer of gyros, gyro assemblies and gyro systems which it sold to the Government, among others,[6] had its main development and production facility in Grand Rapids, Michigan,[7] and was in competition with other manufacturers of gyros, such as Sperry, Bendix, Eclipse, Pioneer, Minneapolis-Honeywell, Kearfoot[8] and others. For many years prior to Adkins' joining Lear, Lear had no new basic gyro development program and its gyro development efforts were sporadic,[9] in that it was content to produce only new systems utilizing the "aluminum" gyros which it had been manufacturing and selling for years.[10] However, the advent of the jet aircraft, capable of far greater speed than propeller driven aircraft, rendered obsolete Lear's aluminum gyros, the most accurate of which had a drift error of 17° per hour,[11] and created an urgent industry-wide need for a more accurate, low-cost gyro.[12] It was therefore imperative for Lear to develop a more accurate, low cost gyro as fast as possible and before other members of the gyro industry.[13]

Adkins was a mechanical engineer, and prior to joining Lear had spent approximately ten years with the Air Force Flight Instrument Section at Wright Field, Dayton, Ohio, where he rose through the ranks to become

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[6]R. T. 2448, 2141-2142.
[7]R. T. 298.
[8]R. T. 2141-2142, 2444-2445.
[9]R. T. 1764.
[10]R. T. 2448.
[11]R. T. 2444, 2141-2142, 290, 308, 2545-2546.
[12]A-I, 72, R. T. 2444, 2141-2142.
[13]R. T. 2141-2142.

chief of that section.[14] In that capacity, it was Adkins' responsibility to determine the future needs of the Air Force with respect to gyros and other flight instruments, to prepare specifications therefor, to select from industry capable development sources, and to supervise the testing and qualification of those instruments.[15] After leaving the Air Force in April of 1951, Adkins accepted employment with the Schwien Engineering Company, another manufacturer of gyros, where he remained until early December of 1951. Thus, when Adkins joined Lear he was unquestionably a gyro expert intimately familiar with all new gyro developments in the United States, and was cognizant of the immediate and future needs of both the Air Force and the Navy.[16]

A gyro is used in aircraft to tell the pilot the direction and attitude of the aircraft.[17] Simply stated, the gyro contains a rotor which is driven electrically at high speed.[18] Because of the principle of gyroscopics, the rotor maintains its stable position in space.[19] The rotor is mounted in an inner gimbal ring, the inner gimbal ring is mounted in the outer gimbal ring, and the whole structure is mounted in a frame fixed to the aircraft.[20] The arrangement of the gimbal rings allows the aircraft to move in any direction while the rotor maintains its fixed orientation in space.[21] Electrical measurements of the position of the gimbals

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[14]R. T. 2442-2443.
[15]R. T. 2443, 2445, 2446-2448.
[16]R. T. 2447.
[17]R. T. 278, 285, 275-276.
[18]R. T. 282.
[19]R. T. 276-278.
[20]R. T. 273-274.
[21]R. T. 272.

are recorded on gauges which tell the pilot the direction and attitude of the aircraft.[22]

Each gimbal ring has two short axle ends 180° apart called trunnions.[23] The trunnions are mounted in ball bearings[24] which are attached to the next outer member, *i.e.*, the inner gimbal is so mounted in the outer gimbal and the outer gimbal is so mounted in the frame.

The most important factor in achieving gyro accuracy is accurate alignment of the ball bearings with each other on the opposite ends of the gimbal.[25] The faces of the ball bearings must be parallel with each other and the centers must be coaxial in order to avoid friction, which causes the gyro rotor to "drift" from its stable position in space and results in gyro inaccuracy.[26]

The gimbal bearings in the Lear "aluminum" gyro were aligned by first holding the gimbal, which was made of one thick piece of rigid aluminum,[27] in a fixed position and by then boring, tapping and reaming coaxial holes oppositely positioned through the gimbal in one operation.[28] The bearings were then fitted, either by pressing or threading, directly into the seats so formed.[29] Parallel alignment in these aluminum gyros thus depended entirely upon the machining of the gimbal.[30] Similarly, coaxial alignment depended solely

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[22]R. T. 278, 284-285.
[23]R. T. 273.
[24]R. T. 273-274.
[25]R. T. 290, 2157-2158.
[26]R. T. 2488-2489, Ex. 74 [R. T. 2494], R. T. 290, 1511, 2505.
[27]R. T. 2156-2157.
[28]R. T. 2156-2157, 2452-2453, 2543-2545.
[29]R. T. 2453, 2156-2157.
[30]R. T. 2156-2157.

upon the accuracy of the drilling operation.[31] Both of these operations required skilled operators and expensive machinery.[32] The same construction was employed by other members of the gyro industry.[33]

After joining Lear on January 2, 1952, Adkins began experimenting with aligning bearing cups into which the bearings were placed.[34] In Adkins' first experimentation the bearing cups were self-aligning.[35] After several months of unsuccessful experimentation using the self-aligning principle, and in July of 1952,[36] Adkins rejected the use of self-aligning bearing cups and in mid-1952[37] conceived of his idea, discovery and invention of precisely prealigning a pair of bearing cups in coaxial and parallel relationship to each other and then adjusting and permanently affixing them in place in oversized and inaccurately formed holes in the gimbal to achieve precise parallel alignment irrespective of the parallelism of the two ends of the gimbal and precise coaxial alignment irrespective of the alignment of the receiving holes.[38] This date is confirmed by the testimony of two other Lear employees (Holmes[39] and Bell[40]) and by Adkins' "priority drawing,"[41] which bears Lear's date stamp of Au-

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[31]R. T. 2156-2157.
[32]R. T. 2544.
[33]R. T. 2451-2453.
[34]R. T. 2455-2456.
[35]R. T. 2455-2456.
[36]R. T. 2455-2458.
[37]R. T. 2458, 306.
[38]See Point V for all citations on this point.
[39]R. T. 2438, 2439-2440.
[40]R. T. 2433-2435.
[41]Ex. 72 [R. T. 2346, 2461].

gust 25, 1952 and Adkins' notarized signature dated August 26, 1962. This drawing depicts and describes alignment of the bearing cups without the bearings in place and states that the surface of the bearing cup and the receiving hole may be of any configuration which will accomplish the desired result. Adkins immediately disclosed his invention to Lear's executive and engineering personnel in California and Grand Rapids, Michigan, both orally and in writing.[42] As confirmed by Lear's progress reports, Adkins' invention reduced gyro drift error to less than 2° per hour,[43] as compared to Lear's previous best of 17° per hour. Adkins thereafter personally adapted his invention for use in the 2156 gyro.[44]

After Adkins' disclosure and in September of 1952,[45] Lear's Grand Rapids division, spurred on by Adkins' achievement, began experimenting on a full-time basis with a self-aligning assembly using cylindrical flanged bearing cups with a knife-edged "tippy washer" which permitted the cup to rock on two different planes in an oversized cylindrical receiving hole,[46] despite Adkins' advice that this approach was unworkable. In the fall of 1953 the Grand Rapids division finally agreed with Adkins, and on October 23, 1953,[47] just as the 2152 and 2153 steel gyros were about to go into production, the Grand Rapids engineering personnel, at a "midnight"

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[42]R. T. 307, 2466, 2136-2140, 2177-2178, 2468.

[43]R. T. 2546.

[44]R. T. 319-320.

[45]R. T. 1763-1764.

[46]R. T. 1768-1769, 2145-2146, 1780-1782, 1783, Ex. L [R. T. 909].

[47]R. T. 1773.

meeting,[48] adopted Adkins invention and began to use it in the 2152 and 2153 steel gyros. Later, Lear used Adkins' invention in the 2151 and 2171 gyros.[49]

The only difference between the 2156 gyro and the four steel gyros was the shape of the bearing cups and the receiving holes.[50] The 2156 gyro used three different bearing cup and receiving hole configurations,[51] one of which was a spherical cup and a conical receiving hole,[52] while all four steel gyros used a cylindrical flanged cup and a cylindrical receiving hole.[53] The difference in shape, however, made no functional difference whatsoever in assembling the gyros or in the resulting structure or in their resulting accuracy.[54] In fact, the difference in the shape of these parts was purely historical, resulting from the shape of those parts used in both Adkins' and Lear's unsuccessful self-aligning experimentation.

On February 15, 1954 Adkins applied for a United States patent on his invention.[55] The original application[56] contained three claims directed to bearing alignment, being numbered 7, 8 and 9. Numbers 7 and 8 were method claims and 9 was an apparatus claim.[57] All of these claims were rejected by the Patent Office on

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[48]R. T. 2149.
[49]Ex. 49 [R. T. 875].
[50]R. T. 612.
[51]A-I, 55, R. T. 316.
[52]A-I, 55, R. T. 316.
[53]A-I, 62-63, R. T. 622-623.
[54]A-I, 65, R. T. 1783, A-I, 60-61, 614-616, A-I, 61-62, 617-619, A-I, 67-70, 2174-2177.
[55]A-II, 29, Ex. P, 2 [R. T. 1328].
[56]A-II, 56-57, Ex. P, 24-25.
[57]R. T. 1286.

September 8, 1954.*[58] On March 9, 1955 Adkins filed Amendment A to his application which cancelled claims 7 and 8 and replaced them with new method claims 18 and 19 and amended apparatus claim 9.[59] This was the status of the application on September 15, 1955, when the parties entered into the 17-page "Agreement"[60] on which this action was brought.

In September of 1952,[61] and immediately after Adkins disclosed his invention to Lear, Lear began negotiations for a more formal agreement. During these negotiations, Adkins was not represented by counsel,[62] whereas Lear extensively used the services of both house counsel and outside patent counsel.[63] As will be seen (Point III, *infra*), Lear obviously envisioned this agreement, couched in terms of a formal patent license agreement, as the means of avoiding its far broader obligation under the letter agreement of December 29, 1951, under which the disclosure of an idea, discovery or invention which Lear used was the sole basis of the bargain.**

The license agreement provided, in effect, in paragraphs 1(b) and 2(a),[64] that Lear took an *exclusive* license of the invention disclosed or intended to be dis-

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*The successive rejection of the claims until the inventor precisely claims the invention disclosed in the specifications is typical, Seidel, What the General Practitioner Should Know About Patent Law and Practice (1956), A. L. I., p. 60.

[58]A-II, 65, Ex. P, 33.

[59]A-II, 69. 71, Ex. P, 37, 39.

[60]A-II, 1, Ex. 8 [R. T. 296].

[61]R. T. 2184-2185.

[62]R. T. 2184-2185, 2500-2501.

[63]See fns. 61, 62.

**See *Desny v. Wilder* (1956), 46 Cal. 2d 715.

[64]A-II, 2, 4, Pet. App. 128, 130.

closed in the application, which license shifted to a license under the issued claims if a patent issued with claims covering the gyros in issue.* In paragraph 17[65] Lear "agreed and understood" that the 2156 gyro and the 2152 and 2153 steel gyros contained Adkins' invention and were covered by his application. Under paragraph 6,[66] Lear could terminate the agreement if the Patent Office refused to issue a patent in final Patent Office action or if a patent issued which did not contain "substantial" claims (claims covering the gyros in issue) or if the patent was held invalid. Under paragraphs 2(a) and 3(g),[67] Lear could terminate the "license" (not the agreement) if it ceased using Adkins' invention in its gyros. Finally, insofar as material hereto, paragraph 13[68] stated that the agreement "cancels and supersedes the agreement between the parties hereto dated December 21, 1951."

Thus, by the agreement of September 15, 1955, Lear accomplished its objective of reducing its liability under the letter agreement by conditioning its obligation for further royalties upon the issuance of a patent having "substantial claims," and further conditioning its obligation for further royalties if the patent was held invalid.

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*The fact that Lear did not license the claims of the application is conclusively demonstrated by the fact that, as Lear knew, the original claims had been rejected and new and amended claims were pending, and that no reference was made in the agreement to the pending claims or to the possibility of further amendments.

[65]A-II, 16-17, Pet. App. 146.
[66]A-II, 11, Pet. App. 138-139.
[67]A-II, 4, 8-9, Pet. App. 130, 135-136.
[68]A-II, 15, Pet. App. 144.

On March 21, 1957 the Patent Office rejected claims 9, 18 and 19 of Amendment A, which was the first Patent Office action after the agreement was signed.[69] Despite the provisions of paragraph 17 of the agreement stating that the steel gyros contained Adkins' invention and the agreement to pay royalties until final Patent Office action, Lear wrote to Adkins on September 10, 1957[70] and advised him that in its opinion his invention was not being used in the steel gyros and was not patentable. Lear then ceased paying royalties on the steel gyros but continued to account for royalties on the 2156 gyro, which it credited against royalties previously paid on the steel gyros. Adkins objected in writing, stating that Lear's letter was "contrary to the signed agreement, specifically with respect to products covered,"[71] and when Lear persisted in its refusal to pay royalties, Adkins resigned on December 26, 1957, effective on February 1, 1958.[72] Under the last unnumbered paragraph of paragraph 11 of the license agreement,[73] the license became non-exclusive on August 16, 1958, six months and fifteen days after Adkins left Lear's employ by reason of Lear's failure to elect one of the exclusive license options of that paragraph.

On September 27, 1957[74] Adkins filed Amendment B to his patent application, further amending apparatus claim 9, amending method claims 18 and 19 and adding "new apparatus claims" 20 and 21. On January 21,

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[69]A-II, 76, Ex. P, 44.
[70]Ex. 36 [R. T. 505, 506].
[71]Ex. 37 [R. T. 506, 507].
[72]Ex. 38 [R. T. 508, 509].
[73]A-II, 15, Pet. App. 144.
[74]A-II, 77-79, Ex. P, 45-47.

1958,[75] and without any intervening Patent Office action, Adkins filed Amendment C, which added new apparatus claims 22 through 26. On June 20, 1958 the Patent Office again rejected all of the bearing alignment claims of Amendments B and C.[76] On December 30, 1958 Adkins filed Amendment D to his application, amending the specifications and further amending original apparatus claim 9, cancelling method claims 18 and 19 and replacing them with new claims 27 and 28, and reasserting claims 20 through 26.[77] Before any Patent Office action on Amendment D, and on April 8, 1959,[78] Lear wrote to Adkins and purported to terminate the license agreement under paragraphs 2(a) and 6 thereof. Adkins again objected in writing.[79]

On May 4, 1959,[80] and again before any Patent Office action on Amendment D, Adkins filed Amendment E to his application, which cancelled claim 9 and claims 20 through 28 and substituted new apparatus and method claims 29 through 41 therefor.

On January 5, 1960 claims 29 through 36 issued to Adkins as claims 9 through 16 in United States Patent No. 2,919,586.[81]

Also on January 5, 1960 Adkins filed suit against Lear.[82] The complaint contained two causes of ac-

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[75]A-II, 81-83, Ex. P, 49-51.
[76]A-II, 89, Ex. P, 57.
[77]A-II, 92-95, Ex. P, 60-63.
[78]Ex. 39 [R. T. 510].
[79]Ex. 40 [R. T. 511].
[80]A-II, 96-100, Ex. P, 64-68.
[81]A-II, 18, Ex. 10 [R. T. 304-305].
[82]C. T. B-1.

tion. Under the first cause of action Adkins sought to recover unpaid royalties under the license agreement for the period of January 1, 1955 to May 31, 1963, and alternatively, if Lear had effected a paragraph 2(a) or paragraph 6 termination of the license agreement by its letter of April 8, 1959, Adkins sought damages for the period thereafter under the unjust enrichment cause of action provided for in *Seagren v. Smith* (1944), 63 Cal. App. 2d 733. Under the alternative second cause of action, if the license agreement failed for any reason, Adkins sought damages for misappropriation in breach of confidence or for breach of an implied-in-fact contract or for unjust enrichment.

The case was tried before a jury between the dates of February 17, 1964 and May 4, 1964.[83] At the outset of the trial the trial court insisted that Adkins elect between the first and second causes of action, and when Adkins refused to do so, the trial court dismissed the second cause of action.[84] During the trial the trial court held,[85] and so instructed the jury,[86] that Lear had effected a termination of the license agreement on April 8, 1959 pursuant to paragraph 2(a), but also instructed the jury that the *Seagren v. Smith* unjust enrichment cause of action was applicable for the period thereafter, and that Lear would continue to be liable for the contractual royalty if it continued to manufacture and sell gyros covered by the claims of Adkins' patent.

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[83]R. T. 1, C. T. 1724.
[84]C. T. 2388.
[85]R. T. 865, 867, 2627.
[86]R. T. 3080.

The trial court made no ruling on the effect of Lear's attempt to terminate the license agreement under paragraph 6.

Before the case went to the jury, the trial court held that Lear was estopped to question the validity of Adkins' patent for the 2156 gyro and directed a verdict in Adkins' favor on the 2156 gyro for the entire period in suit.[87] The parties then stipulated that $16,351.93 had accrued in royalties on that gyro.[88] The trial court, however, submitted to the jury, under proper instructions, the question of the validity of Adkins' patent[89] for the four steel gyros, and also submitted to it whether the four steel gyros infringed Adkins' patent.[90] By its verdict the jury found in favor of Adkins on these issues. Based on uncontradicted evidence as to the amount due, the jury returned a verdict for Adkins on the steel gyros in the amount of $888,122.56 and a total verdict of $904,474.49,[91] which was the full amount of Adkins' claim plus simple interest. On May 4, 1964 judgment was entered for Adkins for $904,474.49.[92]

On July 2, 1964 the trial court granted Lear's motion for judgment *n.o.v.* with respect to the four steel gyros only, holding, after incorrectly redeciding purely factual issues of anticipation and obviousness (see Point V, *infra*), that Adkins' patent was invalid. The trial court then denied Adkins all royalties on the steel

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[87]R. T. 2838.
[88]R. T. 3143-3149, 3159, 3161-3162, 3164.
[89]R. T. 3143-3147, 3159-3161, 3163.
[90]R. T. 3141-3143, 3149-3152, 3154-3161.
[91]C. T. 1724.
[92]C. T. 1725.

gyros, but allowed royalties on the 2156 gyro for the entire period in suit.[93]

The District Court of Appeal[94] reversed the judgment *n.o.v.* for the period prior to April 8, 1959 and affirmed it for the period thereafter, and also affirmed the dismissal of the alternative second cause of action. That court did not consider paragraph 2(a) of the license agreement, but held that Lear had effected a termination on April 8, 1959 under paragraph 6,[95] based on the erroneous conclusion that the third rejection of claims by the Patent Office constituted final Patent Office action (A-69), even though not so designated* and even though a patent thereafter issued to Adkins on his application with claims covering the same invention. The District Court of Appeal then went on to hold that prior to termination of the license agreement, Lear was liable for royalties under the license agreement and estopped to question both validity and infringement,[96] and remanded the case to the trial court for the sole purpose of determining the amount of damages which had accrued prior to April 8, 1959.[97] For the period after that date, the court erroneously concluded that the State courts had no further jurisdiction.[98]

The California Supreme Court reversed the District Court of Appeal, holding that Lear had not effected a termination of the license agreement under either para-

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[93]A-I, 74-82, Pet. App. 94-102.
[94]A-I, 121-158, Pet. App. 54-91.
[95]A-I, 136, Pet. App. 69.
*See Rule 1.113 of the Rules of Practice of the Patent Office.
[96]A-I, 143-149, Pet. App. 76-81.
[97]A-I, 157, Pet. App. 90-91.
[98]A-I, 141, 153-155, Pet. App. 74, 86-88.

graph 2(a)[99] or paragraph 6.[100] In so doing, the California Supreme Court correctly held that the purpose of the paragraph 2(a) termination clause was to permit Lear to avoid the annual minimum royalty payments required by paragraph 3(g) in the event Lear elected to cease using Adkins' invention in its gyros.[101] Based on the stipulation that Lear continuously and without interruption manufactured all five gyros in issue, that court held that Lear had not effected a paragraph 2(a) termination of the license agreement.[102] With respect to the paragraph 6 termination clause, that court correctly held that Lear could not unilaterally and incorrectly anticipate final Patent Office action, and construed that paragraph to permit Lear to terminate only in the event that the Patent Office, in final Patent Office action, refused to issue a patent containing claims covering the gyros in issue.[103] The court then held that under the settled doctrine, Lear was estopped to question the validity of Adkins' patent,[104] and directed its attention to the issued claims. On this issue, the court held that under the Federal test for infringement, (a) Adkins had not added "new matter" to his application;[105] (b) the doctrine of file wrapper estoppel was inapplicable;[106] (c) under the uncontradicted evidence Lear was not building the five gyros in issue according to the prior

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[99]A-I, 191, Pet. App. 28.
[100]A-I, 183-184, Pet. App. 20.
[101]A-I, 186-190, Pet. App. 23-27.
[102]A-I, 191, Pet. App. 28.
[103]A-I, 183-184, Pet. App. 20.
[104]A-I, 191, Pet. App. 28.
[105]A-I, 168-169, Pet. App. 5-6, 33-38.
[106]A-I, 192-193, 196-197, Pet. App. 29, 33.

art patents, considered singly or collectively, together with ordinary mechanical skill;[107] and (d) the issued claims covered all five gyros by their literal language,[108] as well as under the doctrine of equivalents.[109] Thus, the court concluded that Lear was in breach of contract, reversed the judgment *n.o.v.* and reinstated the jury verdict and the judgment thereon.[110] That court then affirmed the dismissal of the alternative second cause of action because it was moot.[111]

Summary of Argument.

I.

As has been seen from the questions presented *supra*, this case involves fourteen separate questions, eleven raised by Lear and three which arise therefrom. Only three questions—the inclusion of alleged "new matter" in the application, the construction of the issued claims, and the application of the doctrine of file wrapper estoppel—were timely raised by Lear in the California courts as Federal questions. As Lear concedes, the California Supreme Court stated the correct rules of law announced by this Court, and asserts only that that court improperly applied those rules. Since this Court is a court of law and not a court for the correction of this type of error, if, indeed, there be any error, none of these questions is a substantial Federal question. Other than the two questions added in its

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[107]A-I, 192, 199-202, Pet. App. 29, 36-38.
[108]A-I, 199, Pet. App. 35-36.
[109]A-I, 199, Pet. App. 35-36.
[110]A-I, 214, Pet. App. 51.
[111]A-I, 212, Pet. App. 48-49.

brief on the merits concerning all of the factual and legal issues of validity and infringement, the remaining questions were raised by Lear in the California courts only as questions of State law and not Federal law. Some related to the construction of a contract, which is purely a question of State law; the rest related to Lear's attempt to avoid the doctrine of licensee estoppel, which Lear conceded was settled law, by claiming under State law that it had either terminated or repudiated the license agreement. With the exception of a few questions mentioned in passing in its petition for a rehearing in the California Supreme Court (which was denied), only in its petition for a writ of certiorari did Lear assert that these questions, and new questions of alleged "misuse" of patent rights, were Federal questions. However, it has long been the rule that this Court will not consider a Federal question unless timely asserted in the State court as a Federal question. Federal questions presented for the first time in a petition for rehearing in the highest State court which is denied, or in a petition for a writ of certiorari, or in a brief on the merits, come too late for consideration by this Court.

Consequently, the petition for a writ of certiorari should be dismissed as improvidently granted, as no question is properly before this Court under long-settled procedural decisions.

II.

No misuse of the patent arises from the California Supreme Court's construction of the license agreement. That court did not construe the license agreement to require "cessation of manufacture," as Lear asserts, but, rather, held only that Lear had no unconditional

termination right and could not terminate the license agreement while continuing to "use Adkins' invention" in its gyros. In other words, Lear does not have to cease manufacturing any gyros in order to terminate the agreement, but only has to stop using Adkins' invention in its gyros. In fact, Lear never ceased manufacturing gyros using Adkins' invention, and thus neither the military nor anyone else was deprived of a single gyro. Consequently, the agreement, as construed, does not enjoin or restrain Lear from manufacturing gyros using Adkins' invention, and 35 USC §283 and 28 USC §1498 (which expressly excepts license agreements) need not be considered.

III.

Nor does a license under a patent application misuse the patent grant by antedating the monopoly of the patent, as Lear also asserts. Although a patent applicant concededly has no property right under a patent application, the subject matter of the license for the period prior to the issuance of the patent is not "property." Lear's agreement to pay a reasonable royalty is based on the disclosure of a secret idea, discovery and invention, and the agreement expressly provides that the payment of royalties ends if no patent is issued in final Patent Office action. Thus, Lear's reliance on *Brulotte v. Thys Co.* (1964), 379 U.S. 29, is wholly inapplicable, since that case involved the collection of royalties after the patent had expired, and the Court recognized that a license of unpatented devices "would present wholly different considerations." No Federal law is violated where a manufacturer agrees to pay an inventor for the disclosure of a secret idea, discovery and invention.

IV.

Since effect must be given to both the patent laws and the anti-trust laws without permitting one to encroach upon the other, where there is no patent misuse (such as price fixing or "tie-ins"), the anti-trust laws do not come into play and the long-settled doctrine of licensee estoppel does not violate the anti-trust laws.

To the contrary, the doctrine of licensee estoppel is necessary to uphold the sanctity of private contracts in order to prevent the licensee from obtaining what he has bargained for and received without paying for it by resorting to a defense based on the invalidity of the patent, which was and is irrelevant to the bargain. This is particularly true in the case at bar. Lear bargained, first, not for a conclusively valid patent, but for the exclusive, immediate and uncontested right to use the secret invention which happened to be disclosed in the patent application and for the cancellation of the letter agreement of December 29, 1951, and, second, if a patent issued, for the exclusive right to use what was covered by the issued claims of a presumptively valid patent, again not a conclusively valid patent, free from suit under the letter agreement and free from suit for patent infringement. In other words, the true basis of the bargain was never a conclusively valid patent, since Lear did not reserve the right to contest validity if sued for breach of contract, nor did Lear reserve the unconditional right to terminate the license agreement, continue to use the invention, and contest validity in a patent infringement suit instituted in the Federal courts. Moreover, because Lear represented to Adkins in the license agreement that if the letter agreement were cancelled, it would continue to pay the royalty if a

patent issued with claims covering the bearing alignment construction in its gyros and Adkins relied on that representation, Lear should now be estopped to avoid that representation.

In addition, the doctrine of licensee estoppel is essential to enforce the policy of the patent clause and the patent laws. The patent laws provide that an issued patent is presumed to be valid, and that "patents shall have the attributes of personal property." It is settled law that Congress intended that one of these attributes is the right of the patentee to license his patent. Similarly, it cannot be denied that Congress intended to allow a patent applicant to license his application, as the patent laws permit sale of a patent application, and a license is a lesser included right. From the standpoint of both the licensor and the licensee, the best if not the only way to arrive at a fair price is based on a royalty per unit sold, as the value of the invention depends on the number of units sold and the price received therefor, which cannot be determined in advance. If the licensee could, after agreeing to pay a royalty, then defeat the collection of the royalty by challenging the validity of the patent and still use the invention, the system of licensing patents would end, since the inventor would not know until after protracted and expensive litigation whether or not he could collect the agreed royalty. This would clearly discourage individual inventors from attempting to discover something new and useful, or encourage them to license their discoveries as trade secrets and not use the patent system, thereby subverting the policy of the patent clause and the patent laws which is to encourage invention and encourage disclosure of the invention. Thus, where

there has been no misuse of the patent, estopping the licensee from contesting validity is essential to effectuate the underlying policy of the patent laws and does so in a manner which does not transgress the anti-trust laws.

The effect of judicial abolition of the doctrine of licensee estoppel on existing business relationships and further use of the patent system cannot be determined from this record or accurately estimated independent of the record, and is a matter which has received the attention of Congress in public hearings held on bills introduced to abolish the doctrine as contrary to the anti-trust laws. All of these bills died in committee, and thus Congress thereby impliedly recognized that the doctrine *per se* does not conflict with the anti-trust laws. If the doctrine, which has been relied upon by thousands of inventors who have licensed their patents, is to be abolished, it should be done by Congress prospectively, and not retroactively by the judiciary.

V.

If the doctrine of licensee estoppel is to be now judicially overturned, elemental considerations of fairness inherent in enforcing agreements require that the licensor be permitted to recover royalties which have accrued prior to the final declaration of invalidity by a court of last resort. Until that event occurs, the licensee has received everything he bargained for and should be required to pay for it. This rule would dampen to some extent the harsh effect of allowing a licensee to use what belongs to the licensor without paying for it, while at the same time it would give the licensee the incentive to challenge validity in order to avoid further royalty payments.

VI.

If the doctrine of licensee estoppel does not violate either the patent laws or the anti-trust laws, the licensee should not be permitted to repudiate and stand out from under the license agreement in order to contest validity, for the simple and obvious reason that what cannot be done directly should not be permitted by indirection. To uphold the doctrine of licensee estoppel and then permit repudiation in order to contest validity would be to place form over substance and would have the same effect as a square holding abolishing the doctrine of licensee estoppel. Having once made its bargain, the licensee should not be able to avoid it by a mere procedural device. This is especially true in the case at bar, where conclusive validity was and is irrelevant to the bargain and invalidity (even if conclusive validity was a part of the bargain) would not result in a total failure of consideration, since Lear received under the license agreement other substantial and non-severable consideration, namely:

1. The exclusive, uncontested and immediate right to use the secret idea, discovery and invention until final Patent Office action;

2. The right to cease payment of "further royalties" if no patent issued, or if a patent issued with claims which did not cover the gyros in issue, or if the patent was held invalid in third party proceedings;

3. The exclusive right to manufacture the device covered by the claims if a patent issued, which included the not inconsiderable right to label the gyros as patented;

4. The protection of a presumptively valid patent (which Lear concedes discourages manufacture by others);

5. The cancellation of the letter agreement of December 29, 1951;

6. Freedom from suit under the letter agreement of December 29, 1951; and

7. Freedom from suit for patent infringement.

VII.

Whether the licensee can challenge the "patentability" of the invention before final Patent Office action is solely a State issue relating to the construction of the agreement. In this case, Lear did not bargain for any particular claims of the application but for issued claims covering its gyro products, and in the interim, the immediate and uncontested right to use the secret invention disclosed in the specifications and which Lear agreed it was using in the 2156 gyro and the steel gyros it was then manufacturing. Thus, the basis of the bargain before final Patent Office action was not the claims of the application nor any new or amended claims but the right to use the invention in its gyros. The total irrelevance of particular claims is well demonstrated by the fact that no mention was made of the fact that the bearing alignment claims of the original application had been rejected at the time the agreement was executed and new claims were pending, and also by the fact that no mention was made of the possibility of future rejections and future amendments inserting new or amended claims. Thus, when Lear asserts that it should be permitted to challenge the "patentability" of Adkins' invention, it is really arguing that the Cali-

fornia Supreme Court's construction of the license agreement, requiring Lear to pay royalties until final Patent Office action, was incorrect, and Lear's argument on this issue simply invites this Court to redecide that State issue in accordance with Lear's views.

VIII.

The doctrine of licensee estoppel should not be any different after a patent issues because the license is initially under the patent application merely because the licensor can broaden or has broadened the claims. If the claims are broadened, the licensee can always show that the issued claims do not cover the invention which was the subject matter of the license agreement and/or that the issued claims do not cover the invention disclosed and described in the original application. However, if the issued claims do in fact cover the same invention disclosed in the application and also the invention which is the subject matter of the agreement, then the licensee has received precisely what he bargained for and must continue to account for royalties.

IX.

Amendment D did not add any new matter to the specifications. Although new language was added, new language is not *ipso facto* new matter. New language is new matter only where it adds to or changes the nature of the invention initially disclosed and described. Where the patentee, in additional language, merely makes explicit what is already implicit, or further defines what is already disclosed and described, or describes an obvious equivalent to what is disclosed and described, this does not constitute new matter. The addition of the words "means" did not change Adkins'

invention from a method to an apparatus, since Adkins always contemplated his invention as both a method and an apparatus by including in the original application both method and apparatus claims and by always having apparatus claims pending. Moreover, the original specifications expressly stated that the bearing cups without the bearings in place could be aligned; and in any event, this is so obvious an equivalent to one skilled in the gyro art as aligning the bearing cups with the bearings in place, that both were originally disclosed. Furthermore, removable and replaceable bearings were always contemplated, since the original specifications teach affixation of the bearing cups only. Although the original specifications are silent as to whether the bearings are removable, everyone skilled in the art knows that removable bearings are essential to good gyro design. Thus, expressly stating that the bearings are removable merely makes explicit what is implicit. The original specifications did not contemplate only a contacting ball in socket device achieving alignment by universal motion. Contact or the absence of contact was not even mentioned in the original specifications, which stated only that the bearing cups could be oriented "in any direction," which is the antithesis of contact. The original specifications also refer to other surfaces capable of being aligned, *i.e.*, "sphere in sphere," "knife edges," "other devices" and other "similarly cooperating surfaces." To add that "any desired configuration" may be used is no more than a redundancy. As all witnesses testified, the original specifications do not expressly mention what the aligning motion is, and, as they all testified and as Lear concedes, it is angular tilt, not universal motion. The

remaining language added by Amendment D further explained the advantages of Adkins' invention over the prior art, which language cannot be new matter since it neither adds to or subtracts from the invention initially disclosed and described and does not change the nature of the invention in any way. Similarly, explaining additional uses for the invention does not change the nature of the invention, but simply notifies the public of the range of applications to which the inventor is entitled, whether he expressly claims them or not.

The insertion of new language, even if it be new matter, cannot constitute fraud, as what is added is fully disclosed to the Patent Office, and the determination of this question rests solely upon a comparison of the new language with the initial disclosure. There is not a scintilla of evidence in this record that Adkins either misrepresented anything to or concealed anything from the Patent Office. In fact, his "priority drawing" dated in August 1952 conclusively disproves any intentional misrepresentation.

Finally, as the California Supreme Court found, the issued claims are fully supported by the initial disclosure, which ends the question.

X.

The California Supreme Court correctly stated the rule for the construction of claims and did not use the specifications to expand the claims. Rather, that court construed the claims with reference to the disclosure in the specifications, and correctly determined that the specifications did not limit the claims to any particular configuration of parts or to any required contact between the parts. Nor did that court read

any part of the cancelled method claims into the issued apparatus claims. To the contrary, the court was very careful to point out that the method and the mandrel used in the method were not in any way a part of the pair of three cooperating elements which comprised the issued apparatus claims.

XI.

The California Supreme Court correctly stated the doctrine of file wrapper estoppel and correctly found that the issued claims were new and broader claims which had not been limited or narrowed in any way to avoid a prior rejection. It has long been the rule that where a patentee, rather than limiting his claims to avoid a rejection, broadens them and obtains those broad claims, no file wrapper estoppel exists. Thus, any interim claims which spoke of "convex" and "concave" surfaces and others which used the term "circular apertures" which were cancelled, cannot limit the issued claims which require only surfaces which "generally correspond" and contemplate, as do the specifications, surfaces of all shapes which will accomplish the desired result, whether spherical, conical, cylindrical, square, flat, concave, convex, etc. Moreover, even if the term "generally corresponds" were limited to convex or concave parts and also to circular apertures in the gimbal, the claims would still cover the steel gyros, which use a convex bearing cup in a circular aperture in the gimbal.

XII.

Although Lear invites this Court to consider every factual and legal issue relating to validity, the Seventh Amendment prohibits this Court from reconsidering the

factual issues of anticipation and obviousness, and permits this Court to consider, based on the evidence most favorable to the patentee, only whether or not the invention meets the constitutional standard for invention. Since this question was not one of the questions presented in Lear's petition, this Court, if it determines that validity must be reached on the merits, should remand the case to the California Supreme Court (as the Government concedes in fn. 15 on p. 26), which has not yet squarely considered that issue, in accordance with the announced policy to permit the lower courts to first pass on questions. If this Court does decide the issue of validity, it should conclude that Adkins' patent is valid, since Adkins has discovered a new permissive cooperation among a pair of three old elements which accomplishes new and useful results in a new and different way, and makes a significant step forward by solving a problem that the prior art failed to solve.

XIII.

Since the jury found that the steel gyros infringe Adkins' patent, the Seventh Amendment also prohibits this Court from reconsidering that factual issue. Moreover, this issue also is not one of the issues raised in Lear's petition. In addition, this Court should not essay an independent determination of the question of infringement merely by looking at Adkins' patent, the prior art patents and the assembly drawings of the steel gyros. Although anyone who can read cross section drawings can identify and count the number of parts, expert testimony is essential for a correct understanding of the cooperative relationship among the different elements in all of these devices, as well as what results

each device achieves and how each does so, if it does. Thus, although Lear states that only radial movement accomplishes alignment in the steel gyros, the uncontradicted testimony of both Adkins' and Lear's witnesses showed that the angular tilt taught by Adkins' patent is the only motion which accomplishes the desired alignment in the steel gyros. This testimony also showed, without contradiction, that the steel gyros have the same elements in the same cooperative relationship and achieve the same result in the same way as Adkins' patent and that no less than five distinctions exist over every prior art patent. Consequently, Adkins' patent, and not any prior art patent, covers the steel gyros by the literal language of the claims. Moreover, since Lear concedes that Adkins' claims cover the 2156 gyro, and all witnesses testified that the only difference in the steel gyros is the shape of the parts, which is a non-functional difference, Adkins' claims also cover the steel gyros by the doctrine of equivalents.

XIV.

In the event that the agreement fails either because the patent is invalid or because the agreement is otherwise unenforceable, this Court should then remand the case to the California courts fo a trial on the alternative second cause of action (misappropriation in breach of confidence, breach of implied-in-fact contract and unjust enrichment) which was dismissed by the California Supreme Court as moot when it affirmed full recovery on the primary first cause of action.

I.

NO SUBSTANTIAL FEDERAL QUESTION WAS TIMELY RAISED IN THE CALIFORNIA COURTS.

In demonstrating that Lear did not timely raise any substantial Federal question, Adkins will use herein, for ease of reference, the same numbering previously used in separately restating the questions presented. Questions Nos. 1, 8 and 14 will not be discussed in this section, as they arise only if Lear timely presented and preserved any substantial Federal question.

Adkins' question No. 2:

Whether the California Supreme Court's construction of paragraphs 2(a) and 3(g) that Lear cannot terminate the license while using Adkins' invention in its gyros violates either the patent laws or the anti-trust laws, was raised by Lear for the first time in its petition for rehearing in the California Supreme Court* only as a "violation of Federal law, the common law and California law,"[112] without any express mention of any section of the patent laws or the anti-trust laws. This brief reference to Federal law is not only insufficient, *Beck v. Washington* (1962), 369 U.S. 541, but also too late if presented for the first time in a petition for rehearing, *Hanson v. Denckla* (1958), 357 U.S. 235; *Radio Station WOW v. Johnson* (1945), 326 U.S. 120. Although Lear urges that it could not anticipate this result, the precise construction adopted by that

*"It is the settled rule [of the California Supreme] Court that points made for the first time on petition for rehearing will not be considered," *A. F. Estabrook Co. v. Industrial Acc. Com.* (1918), 177 Cal. 767.

[112]A-I, 216, Lear's "Petition for Rehearing" in the California Supreme Court, 10.

court was urged by Adkins in his pretrial statement of the issues on October 23, 1963,[113] again in his trial brief,[114] again in two briefs in the District Court of Appeal,[115] and again in petitioning the California Supreme Court for a hearing.[116] Lear argued only that under its construction, the paragraph 2(a) termination right was unconditional.[117] This is, of course, a State question, *Dale Tile Manufacturing Co. v. Hyatt* (1888), 125 U.S. 46, and not a Federal question, and this Court has long refused to consider a Federal question where the party bringing a question from a State court did not intend to assert a Federal right, *Oxley Stave Company v. Butler County* (1896), 166 U.S. 648, 655. (This question was No. 4 in Lear's petition and is included in No. 1 in Lear's brief.)

Adkins' question No. 3:

Whether a license agreement which is terminable if no patent issues violates either the patent laws or the anti-trust laws by requiring the licensee to pay royalties in exchange for the disclosure of an idea, discovery and invention which happens to be described in a secret pending patent application, was only barely mentioned in passing in Lear's petition for rehearing in the California Supreme Court, and was first squarely raised by Lear in its petition for a writ of certiorari in this Court. In the trial court,[118] the District Court of Appeal[119]

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[113]A-I, 50, C. T. 1417.
[114]A-I, 50, C. T. 2319-2322.
[115]Resp. App. G-1-16.
[116]A-I, 159-163, Resp. App. H-1-5.
[117]A-I, 86-98, Resp. App. I-1-13.
[118]A-I, 63, R. T. 1019-1020.
[119]A-I, 117-119, Resp. App. K-1-3.

and the California Supreme Court,* Lear argued only that under its construction of paragraph 6, it could unilaterally anticipate final Patent Office action, determine that no claims covering the gyros in issue could issue, and terminate the license agreement. This is also, of course, a State issue and not a Federal question, and thus question No. 3 should not be considered for the very same reasons that question No. 2 should not be considered. (This question was apparently included in questions Nos. 3 and 4 in Lear's petition and is now apparently included in questions Nos. 1 and 2(c) of its brief.)

Adkins' question No. 4:

Whether the doctrine of licensee estoppel is *per se*, and absent any patent misuse, contrary to either the patent laws or the anti-trust laws, was raised by Lear for the first time in its petition for a writ of certiorari, and therefore this question also comes too late for consideration, *Hanson v. Denckla, supra.* Moreover, Lear effectively waived this question, *Beck v. Washington, supra,* by not challenging the doctrine of licensee estoppel, but, rather, by seeking to avoid it by alleging termination and repudiation of the license agreement in the trial court, the District Court of Appeal and the California Supreme Court. In both appellate courts[120] Lear stated that, "It is a recognized principle of law that when a license agreement provides a grant of a right to either manufacture, use or sell a product incorporating a patented invention, the licensee is estopped to contest the validity of the licensed patent

*The briefs in the District Court of Appeal become the briefs in the California Supreme Court when a hearing is granted.

[120]A-I, 120, Resp. App. E-1.

only as long as the licensee is operating under the license . . . This estoppel lasts only so long as the licensee operates under the license agreement. This estoppel arises not because of the express terms in the agreement, but because the licensee is using and enjoying the benefit and protection of the rights covered by the agreement and should not be permitted to reap the benefits of the agreement and at the same time contest the validity of the patents to show failure of consideration for the agreement." Further, Lear also did not raise this issue as a Federal question, but only as one of State law. Although the Government, in its *amicus* brief (p. 8), agrees that this issue was not timely raised, it claims that in view of *Automatic Radio Mfg. Co. v. Hazeltine Research* (1950), 339 U.S. 827, it would have been futile to do so. However, it has long been the rule in this Court that it will not consider a Federal question unless "the party bringing a case here from [a State] court intended to assert a Federal right," *Oxley Stave Company v. Butler County* (1896), 166 U.S. 648, 655. Thus, this question is also too late for consideration by this Court. (This question was part of No. 1 in Lear's petition and is part of No. 2 in its brief.)

Adkins' question No. 6:

Whether a licensee may always repudiate and stand out from under the license agreement and then contest the validity of the patent in order to attempt to show a total failure of consideration, was raised by Lear only in passing in one brief filed in the District Court of Appeal, and was raised as a State issue and not as a Federal issue.[121] Thus, this question also falls within

[121]A-I, 86-111, Resp. App. I-1-26.

the rules discussed above and is too late for consideration here. (This question was part of No. 1 in Lear's petition and is part of No. 2(a) in Lear's brief.)

Adkins' question No. 7:

Whether a licensee who bargains not for any particular claims in the application, but, rather, for the right to use the invention disclosed in the application may, under the agreement, assert that no claims could issue or challenge the "patentability" of the invention, was also presented for the first time in Lear's petition for a writ of certiorari. Prior thereto, Lear argued, as shown *supra*, that under its construction of the license agreement, it could unilaterally and even incorrectly anticipate final Patent Office action and terminate the agreement. Thus, this issue also was raised below as a State issue and not as a Federal issue, and also falls within the rules discussed above and comes too late for consideration by this Court. (This question was included in Nos. 1 and 2 of Lear's petition and is No. 2(b) in Lear's brief.)

Adkins' question No. 8:

Whether the doctrine of licensee estoppel is any different where the license is initially under a patent application and then shifts to a license under the issued claims, was raised by Lear in the District Court of Appeal as a State question under "the law of California"[122] and was not raised by Lear as a Federal question until its petition for a writ of certiorari. As such, it is also too late under the rules stated above.

Adkins' questions Nos. 9, 10 and 11:

The only questions which were timely raised below are: (1) whether or not new matter was inserted in the

[122]Pet. App. D-164.

specifications (No. 9); (2) the construction of the claims of the patent (No. 10); and (3) the application of the doctrine of file wrapper estoppel (No. 11). With respect to these three limited questions, Lear does not contend that the California Supreme Court did not correctly state the rules as announced by this Court, but, rather, asserts only that the California Supreme Court incorrectly applied these rules to the facts. As will be demonstrated in appropriate portions of this brief, the California Supreme Court did correctly apply these rules to the facts. However, since this Court is not a court for the correction of this type of error (if, indeed, any was committed), none of these questions constitutes a substantial Federal question which should be reconsidered by this Court, Rule 19-1(a), *Beck v. Washington* (1962), 369 U.S. 541, 551-555; Stern & Gressman, *Supreme Court Practice*, 147, §§4-18, 3rd Ed. (1962).

Adkins' questions Nos. 12 and 13:

In its brief, Lear has now included two new questions (Nos. 12 and 13) added into questions Nos. 3 and 4 of its brief. In Lear's question No. 3 (Adkins' No. 12), Lear now seeks to have this Court reconsider every factual and legal issue relating to validity, and in Lear's question No. 4 (Adkins' No. 13), Lear now seeks to have this Court reconsider every factual and legal issue relating to infringement. As shown in Points V and VI, *infra*, neither is a question presented under Rule 23-1(c) nor a "subsidiary question fairly comprised therein." As this Court has noted its

disapproval of "the practice of smuggling additional questions into a case" after certiorari is granted, *Irvine v. California* (1954), 347 U.S. 128, 129, neither of these questions should be considered. Moreover, as as will be seen in Points V and VI, factual questions cannot be reconsidered by this Court in view of the Seventh Amendment, *Chicago, Burlington etc. Rd. v. Chicago* (1896), 166 U.S. 226, 242-245. In addition, efficient judicial administration requires that in the event this Court overrules the doctrine of licensee estoppel, it should remand this case to the California Supreme Court for a ruling on validity, *Abbott Laboratories v. Gardner* (1967), 387 U.S. 136, 156, as the Anti-Trust Division concedes (p. 26).*

For all of the foregoing reasons, the writ of certiorari should be dismissed as improvidently granted, as 28 USC §1257(3) and the established procedural rules of this Court require no less.

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*However, if the doctrine of licensee estoppel is overturned and this court undertakes to decide the many questions relating to validity and infringement, this Court should also consider the question of the proper cut-off date for accrued royalties (Adkins' question No.5) and the alternative second cause of action (Adkins' question No. 14).

II.

THE CALIFORNIA SUPREME COURT'S CONSTRUCTION OF PARAGRAPH 2(a) IN CONJUNCTION WITH PARAGRAPH 3(g) DOES NOT ENJOIN OR RESTRAIN LEAR, EITHER BEFORE OR AFTER THE PATENT ISSUES, FROM MANUFACTURING GYROS CONTAINING ADKINS' INVENTION, BUT ONLY REQUIRES LEAR TO PAY THE AGREED ROYALTY. MOREOVER, THE LICENSE UNDER THE APPLICATION DOES NOT ANTEDATE THE PATENT GRANT, SINCE PRIOR TO ISSUANCE OF THE PATENT, THE ROYALTY IS IN EXCHANGE FOR THE DISCLOSURE OF THE IDEA, DISCOVERY AND INVENTION EMBODIED IN THE SECRET APPLICATION.

A. The Decision Below Merely Requires Lear to Pay the Agreed Royalty if It Chooses to Use Adkins' Invention. It Does Not Require Lear to Cease Manufacturing All Gyros, nor Even Gyros Using Adkins' Invention. Nor, for That Matter, Did Lear Cease Manufacturing Gyros Using Adkins' Invention.*

In its opinion the California Supreme Court held that Lear licensed, under paragraphs 1(b) and 2(a), the invention "disclosed or intended to be disclosed"[123] in the specifications of the application and agreed to pay royalties on the 2156 gyro and the steel gyros until final Patent Office action.[124] That court further held that

*Lear's arguments that (a) until any patent is held valid, every licensor violates the anti-trust laws unless the license agreement contains an unconditional termination provision, and (b) until the patent is held valid, a patentee violates the anti-trust laws by licensing the patent, will be considered in Point III, *infra*, in connection with the doctrine of licensee estoppel in order to avoid unnecessary repetition.

[123]A-I, 181-182, Pet. App. 18-19.

[124]A-I, 180, fn. 16, Pet. App. 20-21, fn. 16 on p. 17.

if a patent did issue with claims covering the invention, Lear's license automatically shifted to a license under the issued claims if they covered the gyros in issue, and Lear was obligated to continue to pay the royalty unless the patent was thereafter held invalid in a third party adjudication.[125] Although Lear argued that the right of termination set forth in paragraph 2(a) was unconditional, the California Supreme Court disagreed and found that the purpose of the paragraph 2(a) right of termination was to save Lear the annual minimum royalty payments required by paragraph 3(g) in the event it decided to cease using Adkins' invention in its gyros.[126] Thus, the court held that Lear did not and could not terminate the license agreement under paragraph 2(a) while continuously using Adkins' invention in its gyros, and was therefore required to pay the agreed royalty.*[127]

Lear asserts, however, that the license and the patent are unenforceable because the foregoing construction placed upon the license agreement by the California Supreme Court results in a misuse of the patent grant in contravention of the anti-trust laws—the supposed misuse being the requirement that in order to terminate the license agreement, Lear must cease using Adkins' invention in its gyros. According to Lear, the result is somehow that the agreement is tainted with an illegality, rendering it unenforceable. The sole authority cited by Lear for this remarkable conclusion is *Apex Hosiery Co. v. Leader* (1940), 310 U.S. 469, which involved a

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[125]A-I, 180, fn. 16, Pet. App. fn. 16 on p. 17.

[126]A-I, 190, Pet. App. 27.

*Lear's obligation, of course, expires with the patent, *St. Paul Plow Works v. Starling* (1891), 140 U.S. 184.

[127]A-I, 191, Pet. App. 28.

sit-down strike by a union, resulting in a stoppage of interstate shipments. Since no patent and no license agreement were involved and no anti-trust violation was found, the case is hardly relevant here, much less controlling.

It is important to note that the California Supreme Court did not hold that in order to terminate the license agreement Lear must cease manufacturing all gyros or even any gyros, but held that Lear must cease "using Adkins' invention"[128] or "incorporating Adkins' invention"[129] in its gyros. Significantly, Lear refers only to "cessation of manufacture" (p. 12), which immediately suggests a requirement which may be suspect under the anti-trust laws, and ignores the fact that in no less than ten different places[130] the California Supreme Court states that in order to terminate under paragraph 2(a), Lear must only cease using Adkins' invention in its gyros. Thus, the agreement as construed by the California Supreme Court simply says that if Lear uses Adkins' invention, it has to pay royalties, and that if Lear wants to stop paying royalties, it has to stop using Adkins' invention. Stated differently, the agreement merely provides that Lear cannot keep both the invention and the royalties; but nothing in the agreement or the California Supreme Court's construction of it says that Lear has to stop manufacturing all, or for that matter any, gyros. No court has ever held invalid the requirement that a licensee must pay royalties for using an invention.* From the foregoing, it

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[128]A-I, 187-189, 190, Pet. App. 24-25, 27.

[129]A-I, 181, Pet. App. 18.

[130]A-I, 182-190, Pet. App. 19-27.

*Both before and after Adkins joined Lear, Lear manufactured gyros which did not incorporate Adkins' invention and sold them

is obvious that the California Supreme Court's construction of the paragraph 2(a) termination clause does not in any way restrain, enjoin or prohibit Lear from using Adkins' invention in its gyros, but only requires Lear to pay the agreed royalty if it does so.

In fact, no trade or commerce was restrained, since Lear never stopped, but to the contrary, continuously manufactured gyros using Adkins' invention. The point is that Lear was not required to and did not cease manufacture of gyros using Adkins' invention. How, then, was the military injured, since it was not deprived of a single gyro and there is no evidence that Lear would have charged the military even a penny less if relieved of the obligation to pay royalties. Thus, the California Supreme Court's construction of the license agreement is a restraint only to the extent that the obligation to pay the royalty might discourage Lear's use of Adkins' invention. Consequently, the real question is whether the use of the doctrine of licensee estoppel to enforce continued payment of the royalty pursuant to the agreement violates the patent laws or the anti-trust laws, and this issue will be considered in Point III, *infra.**

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to the Navy and the Air Force, and may still do so. In fact, Lear can now make gyros just as accurately without using Adkins' invention by reason of precise machining techniques. In this regard, in May of 1968 Lear so stated to Adkins and gave him a gimbal with bearing cups in place which had been aligned by this machining technique and which, when tested by Adkins, were as accurately aligned as bearing cups using Adkins' invention.

*If the agreement should be deemed to violate the anti-trust laws, Lear could not only avoid paying royalties, but also, under *Perma-Life Mufflers, Inc. v. International Parts Corp.* (1968), ... U.S. ...., might well be able to recover treble the royalties already paid—an unconscionable result hardly likely to encourage invention and licensing of inventions.

Based on the erroneous premise that the California Supreme Court's construction of paragraph 2(a) is a *complete* restraint on manufacture, Lear argues (a) that the patent laws permit injunction (35 USC §283) against manufacture only if the patent is first held valid, and (b) that since the gyros in issue are manufactured for sale to the military,* an inventor cannot, under 28 USC §1498, enjoin manufacture but only sue the United States for damages in the Court of Claims. The simple answer is that the California Supreme Court did not "enjoin" Lear from manufacture. Thus, whether the California Supreme Court can "enjoin" manufacture without first testing the validity of the patent need not be considered. Moreover, Adkins is not suing to enjoin manufacture, but, rather, is suing Lear for damages for breach of contract, and thus 28 USC §1498, which expressly excepts actions based on license agreements, is inapposite, *Newport News Shipbuilding & Dry Dock Co. v. Isherwood* (1925, Cir. 4), 5 F. 2d 924.

If the military truly believed that Adkins' patent was of dubious validity and the 1¼% royalty an unnecessary burden, it could have tested validity by simply having gyros using Adkins' invention manufactured by any one of Lear's many competitors. Adkins then would have been remitted to a suit against the United States in the Court of Claims, in which validity would have been an issue.

Lear's real complaint seems to be that the California Supreme Court's construction of the license agreement,

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*Although it is not denied that some part of Lear's sales was to the military, neither Lear nor the Government can seriously assert that *all* sales were to the military, as Lear also sold gyros containing Adkins' invention for use in commercial aircraft, one of which was the French-made Caravelle aircraft.

particularly paragraph 2(a), is wrong. However, as Lear concedes (p. 23), the construction of a license agreement is purely a question of State law which this Court will not reconsider, *Dale Tile Manufacturing Co. v. Hyatt* (1888), 125 U.S. 46, *American Railway Express Co. v. Kentucky* (1927), 273 U.S. 269, *Walter A. Wood Co. v. Skinner* (1891), 139 U.S. 293.

B. A License of an Idea, Discovery and Invention Disclosed in a Secret Patent Application Is Not a Misuse of the Patent Grant, Since a Trade Secret and Not Property Is the Subject of the License.

Lear argues that if, prior to the issuance of a patent, the licensee must cease manufacture of the licensed device in order to avoid paying the royalty, this is somehow enforcement of patent rights before they exist and constitutes patent misuse. Lear fashions this argument on the rule that a patent applicant has no property right under an application, *Marsh v. Nichols, Shepard & Co.* (1888), 128 U.S. 605, and asserts that where a licensee must pay royalties under a license of the application, this is analogous to the situation in *Brulotte v. Thys Co.* (1964), 379 U.S. 29. However, in that case this Court held only that a licensor cannot extend the monopoly of the patent by exacting royalties *after* the patent expired because the device is then in the public domain and free for all to use. As this Court there recognized, at page 32, "The sale or lease of *unpatented* machines . . . would present wholly different considerations" (emphasis added). Before the patent issues an entirely different situation exists, as the invention disclosed in the patent application is not available to the public and is secret, 35 USC §122. Although the

applicant has no property right in the invention, there is nothing in either the patent laws or the antitrust laws which prohibits the inventor from licensing the secret invention as a trade secret in exchange for a royalty. A royalty agreement founded upon the disclosure of an idea, discovery or invention is purely a matter of contract governed by State and not Federal law, which neither grants a property right in the invention nor antedates the patent monopoly for the period prior to the issuance of the patent, *Hamilton v. Park McKay Co.* (1897), 112 Mich. 138, 70 N.W. 436. Neither the patent laws nor the anti-trust laws are violated where a manufacturer agrees to pay a royalty for the disclosure of an idea, discovery or invention, and it follows that a manufacturer may so agree for an invention which also happens to be described in a pending patent application, *Automatic Radio Mfg. Co. v. Hazeltine Research* (1950), 339 U.S. 827. In fact, licensing the disclosure of an idea, discovery or invention, whether before or during the pendency of a patent application, is entirely consistent with the patent clause (Art. I, Sec. 8, Cl. 8), since it promotes the progress of science and the useful arts by allowing the device to be manufactured and marketed at the earliest date, rather than waiting for the years normally consumed by the prosecution of a patent application. Thus, in the case at bar, the agreement under which Lear initially licensed the invention disclosed or intended to be disclosed in the specifications and reserved the right to terminate the license agreement if no patent issued, in no way contravenes either the patent laws or the antitrust laws, since the license under the application is not based on any patent right but on the disclosure of the idea, discovery and invention.

It has long been settled law that an inventor may sell or license his invention whether or not it is patented, and license agreements often include a license under the patent application. See, *e.g., Automatic Radio, supra, Gayler v. Wilder* (1850), 10 How. 509, *Brush Elec. Co. v. California Elec. Light Co.* (1892, Cir. 9), 52 Fed. 945, 963, *Keystone-Type Foundry v. Fastpress Co.* (1921, Cir. 2), 272 Fed. 242, *Boston v. Boston Stock Car Co.* (1898), 171 Mass. 437, 50 N.E. 1029, R. Ellis, Patent Licenses, §§5, 99 (3rd Ed., 1958). In fact, the patent laws expressly permit sales of patent applications, 35 USC §§118, 152, *Hendrie v. Sayles* (1878), 98 U.S. 546, and consequently licensing a patent application, which is a lesser included right, is entirely consistent with the patent laws, *B. F. Gladding & Co. v. Scientific Anglers* (1957, Cir. 6), 245 F. 2d 722, *Fur Grooving & Shearing Co. v. Turano* (1941, D.C., S.D., N.Y.), 39 F. Supp. 877.

None of the cases cited by Lear has anything to do with a license of an invention disclosed in an application under which the licensee agrees to pay a royalty for the disclosure of a secret idea, discovery and invention. Suffice it to say that the cases Lear cites involve either price fixing, *Sola Electric Co. v. Jefferson Electric Co.* (1942), 317 U.S. 173, *Katzinger Co. v. Chicago Metallic Mfg. Co.* (1947), 329 U.S. 394, or "tie-ins," *Mercoid Corp. v. Mid-Continent Investment Co.* (1944), 320 U.S. 661, or collection of royalties after the patent's expiration, *American Securit Company v. Shatterproof Glass Corp.* (1959, Cir. 3), 268 F. 2d 769, or the suppression of competing products, *National Lockwasher Co. v. Garrett* (1943, Cir. 3), 137 F. 2d 255, *McCullough v. Kammerer Corp.* (1948, Cir. 9), 166 F. 2d

759, or restrictions on the use of the product, *United States v. Univis Lens Company* (1942), 316 U.S. 241, and are therefore not in point.

Lear obviously asserts its "misuse" arguments at the outset because it hopes that if a misuse exists, the agreement is unenforceable irrespective of the validity of the patent, but there is no authority from this or any other court, and no valid reason which supports Lear's position.

III.

THE DOCTRINE OF LICENSEE ESTOPPEL DOES NOT CONFLICT WITH EITHER THE PATENT LAWS OR THE ANTI-TRUST LAWS, BUT IS NECESSARY TO UPHOLD THE SANCTITY OF PRIVATE CONTRACTS, TO ENFORCE THE POLICY OF THE PATENT LAWS, AND TO PROTECT INVENTORS WHO HAVE RELIED ON THE DOCTRINE.

A. The Doctrine of Licensee Estoppel Is Essential to Uphold the Sanctity of Private Contracts Where a Conclusively Valid Patent Is Not Part of the Bargain.

The doctrine of licensee estoppel does no more than foreclose a party who accepts a license from avoiding his bargain at a later date by asserting that the patent is invalid. Although the doctrine has become known as "estoppel to question validity," it is more accurately described as estoppel by contract to avoid a bargain by resort to a defense which was and is irrelevant to the bargain.

In the typical situation, the licensee, whether under a patent application or an issued patent, knows with precision the nature of the invention and has an op-

portunity to make its own determination, simply by searching the prior art, as to whether the invention can be or is the subject of a valid patent. After making this determination, the licensee, of course, has a free choice whether to take a license and pay a royalty therefor or reject the license, use the invention and risk a suit for infringement. Having made the free choice to enter into a license agreement, the licensee, under pure principles of contract law, should not be permitted at a later date to avoid its bargain, *Pope Mfg. Co. v. Owsley* (1886), 27 Fed. 100, especially where the licensee continues without interruption (as is Lear in the case at bar) to make and sell products incorporating the invention under the protection of both the patent and the license agreement. As this Court said in *Kinsman v. Parkhurst* (1855), 18 How. 289, at 292-293:

> ". . . we are all of the opinion, that under the agreement . . . the invalidity of the patent would not afford a bar to the complainant's right to an account. Having actually received profits from sales of the patented machine, which profits the defendants do not show have been or are in any way liable to be affected by the invalidity of the patent, its validity is immaterial. *Moreover, we think the defendants are estopped from alleging that invalidity.* They have made and sold these machines under the complainant's title . . . and they can no more be allowed to deny that title and retain the profits to their own use, than an agent, who has collected a debt for his principal, can insist on keeping the money, upon an allegation that the debt was not justly due.

"The invalidity of the patent does not render the sales of the machine illegal, so as to taint with illegality the obligation of the defendants to account" (emphasis added).

In the case at bar, Lear knew of Adkins' broad experience in the gyro industry and recognized the industry-wide need, created by the advent of jet aircraft, for a more accurate, low-cost gyro.[131] Consequently, on December 29, 1951, Lear entered into a one-page letter agreement with Adkins whereunder Lear agreed to pay Adkins "a mutually satisfactory royalty" for all "ideas, discoveries and inventions" relating to gyros which Adkins disclosed to Lear and Lear used.[132] The agreement made no mention of either patents or patentable inventions, but, to the contrary, was simply an agreement to pay Adkins for any ideas, discoveries and inventions which he disclosed to Lear and which Lear used, irrespective of whether those ideas, discoveries and inventions were patented or patentable. Pursuant to and in reliance upon this agreement, Adkins associated himself with Lear on January 2, 1952.[133] In mid-1952,[134] after considerable experimentation, Adkins conceived of and reduced to practice his invention for the more precise alignment of gyro bearings and fully disclosed it to Lear.[135] After over one year of unsuccessful experimentation,[136] which did not commence until after Adkins had disclosed his invention, Lear began using Adkins' invention in its steel

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[131] See fn. 12.
[132] See fn. 1.
[133] See fn. 1.
[134] See fn. 37.
[135] See fn. 42.
[136] See fns. 45, 46, 47.

gyros.[137] However, immediately after Adkins' disclosure, Lear began negotiating with Adkins for a more formal agreement.[138] After approximately three years of negotiation, the agreement of September 15, 1955 resulted.[139] Under this agreement, it was stated that "this agreement cancels and supersedes the Agreement . . . dated December 29, 1951."[140] Pursuant to other provisions, Lear agreed to pay Adkins a royalty of 1¼% until final Patent Office action on his application and to continue to pay that royalty if a patent issued with claims covering the invention described in the specifications of the patent application.[141] It is thus obvious from both the relationship of the parties and the terms of the agreement that Lear and not Adkins desired a formal patent license agreement, not because Lear was concerned about or was bargaining for a conclusively valid patent, but, rather, because Lear envisioned the new agreement as a possible method of reducing its far broader liability under the letter agreement of December 29, 1951. Thus, Lear inserted in paragraph 6[142] that if no patent was issued by the Patent Office, or if the patent was subsequently held invalid, Lear's obligation to pay further royalties ceased. Had Lear desired a conclusively valid patent rather than a presumptively valid patent, it could easily have reserved the right in the agreement either to terminate the agreement while continuing to manufac-

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[137]See fns. 48, 49.
[138]See fn. 61.
[139]A-II, 1, Ex. 8.
[140]A-II, 15, Pet. App. 144.
[141]See fn. 125.
[142]A-II, 11, Pet. App. 138.

ture covered gyros or to contest the validity of the patent. However, since conclusive validity of the patent was not part of the bargain, Lear should not be able to challenge the validity of the patent in an effort to avoid paying for what it in fact bargained for, received and used, namely:

1. The exclusive, uncontested and immediate right to use the secret idea, discovery and invention until final Patent Office action;

2. The right to cease payment of "further royalties" if no patent issued, or if a patent issued with claims which did not cover the gyros in issue;

3. The exclusive right to manufacture the device covered by the claims if a patent issued, which included the not inconsiderable right to label the gyros as patented;

4. The protection of a presumptively valid patent (which Lear concedes discourages manufacture by others);

5. The cancellation of the letter agreement of December 29, 1951;

6. Freedom from suit under the letter agreement of December 29, 1951; and

7. Freedom from suit for patent infringement.

In short, the case at bar is different from the typical situation where a patentee forces an infringer into accepting a license under threat of suit, since here Adkins was employed to invent the very device which Lear is using, in accordance with the letter agreement, under which patentability was totally irrelevant, and which

agreement was replaced by the license agreement, under which conclusive validity of an issued patent was also irrelevant.

Just as in the case of *Kinsman v. Parkhurst* (1855), 18 How. 289, the alleged invalidity of the patent in no way affects either the bargain of the parties based on the consideration enumerated above, or the profits Lear has already realized from completed sales of gyros containing Adkins' invention. In fact, invalidity of Adkins' patent would not even affect Lear's future profits, since they depend, in large part, not upon the protection of a conclusively valid patent, but, rather, upon the fact that Lear began to incorporate the invention in its gyros in mid-1952, when the invention was still secret, and thereby gained an invaluable time advantage equal to the tooling and manufacturing time over its competitors. This tooling and manufacturing time consumed almost three years, the first sale taking place after January 1, 1955,[143] and allowed Lear to become the first manufacturer to market a completed instrument containing Adkins' invention. This advantage has permitted Lear to remain the *sole* manufacturer of gyros incorporating Adkins' invention, and resulted in Lear's amassing sales of over $67,000,000.00 from January 1, 1955 to May 31, 1963.[144] Therefore, since Lear has already reaped the profits derived from the use of Adkins' invention, and will continue to do so whether or not the patent is valid, invalidity is not a defense and Lear should be required to pay the agreed royalty, *United States v. Harvey Steel Co.* (1905), 196 U.S. 310, *Baker Oil Tools, Inc. v.*

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[143]A-II, 7, Pet. App. 134.

[144]Exs. 48 and 49.

Burch (1934, Cir. 10), 71 F. 2d 31. As the court said in the *Baker* case, *supra,* at page 37: ". . . there is the undisputed fact that Baker used the Burch patents, through the first three critical years, to frighten off competitors and to build up a business that now approaches a monopoly. Having done this, with full and exact knowledge of the patent situation, it may not cast Burch off when it conceives that his patents have served their purpose. During these critical years, Baker's conduct deprived Burch of an opportunity to market his patents with other manufacturers."

In this case the license was exclusive from mid-1952 until August 15, 1958. During this period Adkins could not license others or use the invention himself. Having gained a great competitive advantage over other manufacturers during this period, Lear, at its election, permitted the license to become non-exclusive on August 15, 1958, as no further exclusive protection was necessary. As a result, Lear should not now be heard to say that it received nothing except freedom from a patent infringement suit, which it no longer desires. Thus, the Government is wrong when it states, on page 23, that the license was non-exclusive, and correct when it states, on page 24, that "from the standpoint of fair dealing," an exclusive licensee is different since the patentee "gave up other licenses or business arrangements."

Therefore, in this case the doctrine of licensee estoppel is essential to preserve the sanctity of a private contract by preventing Lear from attempting to avoid its obligation to pay for what it in fact bargained for and received by resort to an alleged defense which was and is completely irrelevant to the bargain.

Since validity cannot affect the bargain between Adkins and Lear, it is not really necessary to consider Lear's additional argument that the doctrine of estoppel is not based on the elements required for an equitable estoppel, and that the analogy to estoppel by deed and estoppel of a tenant to question his landlord's title is imperfect. However, even Lear's argument on these issues is incorrect. The analogy to estoppel by deed was discussed in *Westinghouse Co. v. Formica Co.* (1924), 266 U.S. 342, which concededly involved an assignment and not a license. However, where the license is exclusive, the licensee receives everything he would have received under an assignment except only title, that is, the exclusive right to use the invention. Thus, just as the assignor should not be able to defeat the rights granted to the assignee under the contract, so also the licensee should not be permitted to say he received nothing when in fact he received the exclusive right to use the invention under a presumptively valid patent. The analogy to the landlord and tenant situation is, of course, more perfect. The tenant who has possession of the premises has received precisely what he bargained for, namely, the use of the premises, and should pay for it. If he is evicted by a third party who in fact has title, his obligation ceases. A licensee of a patent, whether exclusive or non-exclusive, similarly receives precisely what he bargained for, namely, the right to use the invention. If the license is exclusive, the licensee presumably bargains also for the exclusive use of the invention and the protection of a presumptively valid patent, there being no warranty that the patent is in fact valid unless it is expressly so stated in the license agreement, *Headley Good Roads Co. v. Bar-*

ber Asphalt Paving Co. (1925, Cir. 3), 292 Fed. 119, Ellis, Patent Licenses, 244, §217, 3rd Ed. (Deller's), 1958.* Until the licensee is evicted by a decision rendered in third party adjudication that the patent is invalid, the licensee also receives precisely what he bargained for. Just as the tenant cannot defend on the ground that someone else might have title to the property, so, also, the licensee cannot defend on the ground that someone else might make the patented device and thereby evict him from exclusive use. The fact that the tenant uses realty and the licensee uses personalty, or an "intangible," as Lear prefers to call it, is a difference without a distinction. In both cases the tenant or the licensee has received all that he bargained for and should pay for it.

If the license is non-exclusive, presumably the licensee bargains for the right to use the invention free from suit. Although Lear and the Government argue that if this is the consideration, it is severable when the licensee decides he would rather be sued than pay the royalty, the obvious answer in this case is that Lear's license was exclusive for six years, and became non-exclusive at Lear's election when it no longer needed exclusive protection, and was exclusive in fact thereafter. Thus, the original consideration enumerated above, and which is not severable, must control this case. In this regard, it has long been the rule that a partial failure of non-severable consideration does not excuse the defendant's performance, *United States v. Harvey Steel Co.* (1905), 196 U.S. 310, *Patterson Bal-*

*In paragraph (B) of the license agreement Adkins warranted only that "to the best of his knowledge and belief," he was the owner of the invention disclosed or intended to be disclosed in his application.

lagh Corp. v. Byron Jackson Co. (1944, Cir. 9), 145 F. 2d 786, *Del Riccio v. Photochart* (1954), 124 Cal. App. 2d 301. Moreover, having made its bargain, Lear should not be permitted to force Adkins at a later date to incur the expense of patent litigation when the validity of the patent played no part in the bargain and is still irrelevant to the bargain.

Although Lear also argues that the elements of an equitable estoppel are lacking, the converse is true. Equitable estoppel, commonly referred to as estoppel by conduct, is based on the premise that where a defendant makes certain representations to a plaintiff upon which the plaintiff relies, the defendant should not be permitted and is therefore estopped to avoid the consequences of those representations, *Jones v. United States* (1877), 96 U.S. 24, 29, Restatement of Contracts, §90. In the case at bar, Lear, in the license agreement, represented to Adkins that in exchange for the cancellation of the letter agreement of December 29, 1951, Lear would pay royalties until final Patent Office action and thereafter if a patent issued. Since the letter agreement of December 29, 1951 is novated and cannot now be used, *Aetna Casualty & Surety Co. v. Bettens* (1953, D.C., Cal.), 111 F. Supp. 111, 113 (applying California law), Lear should not be permitted to escape from those representations by asserting that the patent is invalid, but should be estopped to do so, as Adkins obviously relied on Lear's representations in executing the license agreement, *Brand Plastics Co. v. Dow Chemical Co.* (1967, D.C., Cal.), 154 USPQ 140.

B. There Is a Public Policy in Favor of Enforcing Contracts.

In this case Lear sought to avoid its obligation to pay royalties under the contract by challenging the validity of Adkins' patent. Having been frustrated in its attempt to avoid royalty payments by challenging the validity of the patent, Lear now argues that the doctrine which prevented it from challenging validity violates the policies of the patent and anti-trust laws.

This position would seem to conflict with the line of cases culminating in *Kelly v. Kosuga* (1959), 358 U.S. 516. In the *Kelly* case, a buyer sued to recover the unpaid balance due on a sale contract. The seller alleged that the sale was part of an agreement which violated the Sherman Act. This Court rejected the seller's defense, stating, at pages 518-520:

> "As a defense to an action based on contract, the plea of illegality based on violation of the Sherman Act has not met with much favor in this Court. This has been notably the case where the plea has been made by the purchaser in an action to recover from him the agreed price of goods sold.
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> * * *
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> ". . . the federal courts should not be quick to create a policy of nonenforcement of contracts beyond that which is clearly the requirement of the Sherman Act.
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> * * *
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> "Past the point where the judgment of the Court would itself be enforcing the precise conduct made unlawful by the Act, the courts are to be guided by the overriding general policy, as Mr. Justice

Holmes put it, 'of preventing people from getting other people's property for nothing when they purport to be buying it.' "

C. Absent Any Patent Misuse, the Doctrine of Licensee Estoppel Is Entirely Consistent With the Anti-Trust Laws and Is Essential to Effectuate the Policy of the Patent Laws.

1. The Doctrine of Licensee Estoppel Effectuates the Policy of the Patent Laws in a Manner Which Does Not Conflict With the Anti-Trust Laws.

Lear and the Government both argue that the doctrine of licensee estoppel conflicts with the patent and the anti-trust laws, in that if the patent is in fact invalid, the doctrine perpetuates an invalid monopoly and imposes the burden of the royalty on the public. This argument fails, of course, if the sales price fixed for the product has nothing to do with the royalty, but, rather, is set either to meet competition or to exact what the traffic will bear. However, assuming, *arguendo,* that the royalty is in fact reflected in the sales price, the question is not as simple as Lear and the Government state it.

The real question is whether an *unreasonable* burden is imposed on the public which Congress intended to prevent, *United States v. United States Gypsum Co.* (1948), 333 U.S. 364, 400-401. The patent laws, enacted pursuant to express Constitutional authorization, are, of course, an exception to the anti-trust laws. The anti-trust laws should not be used to either destroy or weaken the patent system, but, rather, the line between the two should be drawn to give effect to the underlying policy of both. The patent laws provide that an issued patent is presumed to be valid, 35 USC §282.

They also provide that "patents shall have the attributes of personal property," 35 USC §261. One of these attributes is the right to license others to use the patented device in exchange for a royalty, *General Talking Pictures Corp. v. Western Electric Co.* (1938), 305 U.S. 124. The right to license the patent and collect the royalty is necessary to give the patent grant substance and value. See *Westinghouse Co. v. Formica Co.* (1942), 266 U.S. 342, 348. The collection of reasonable royalties under the license of a presumptively valid patent (the validity of which has not been tested) cannot and does not conflict with the policy of the anti-trust laws, *United States v. National Lead Co.* (1947), 332 U.S. 319, *Blount Mfg. Co. v. Yale & Towne Mfg. Co.* (1909, D., Mass.), 166 Fed. 555, 557. To the contrary, the right to receive a royalty is an absolute right under the patent laws precisely because the patent is presumptively valid and is property. Since the collection of the royalty does not violate the anti-trust laws and is essential to give the patent grant value and substance, it follows that estopping the licensee from contesting validity in order to defeat that royalty cannot violate the anti-trust laws, but, rather, is also essential to enforce the underlying policy of the patent laws, *Automatic Radio Mfg. Co. v. Hazeltine Research* (1950), 339 U.S. 827, *Rail-Trailer Co. v. ACF Industries, Inc.* (1966, Cir. 7), 358 F. 2d 15, *Steiner Sales Co. v. Schwartz Sales Co.* (1938, Cir. 10), 98 F. 2d 999, *Foster Wheeler Corporation v. Furnace Eng. Co.* (1942, D.C., N.Y.), 46 F. Supp. 867, *Philadelphia Creamery S. Co. v. Davis & Rankin Building & M. Co.* (1896, Cir. Ill.), 77 Fed. 879. As this Court held in the *Hazeltine* case, *supra*, where there is no misuse of the patent, the

application of the doctrine of estoppel in aid of the collection of a reasonable royalty does not violate either the patent laws or the anti-trust laws because the "royalty provision . . . creates no restraint of competition beyond the legitimate grant of the patent, [as] the right to a patent includes the right to market the use of the patent at a reasonable return." As this Court also stated in the *Hazeltine* case, *supra,* unless there is a showing that the license agreement or the practices under it are "a misuse of patents or contrary to public policy," the "general rule" of licensee estoppel should be applied.

Abolition of the doctrine of licensee estoppel would have the effect of destroying a substantial part of the patent system, which is designed to promote science and the useful arts by granting to an inventor a limited monopoly in exchange for the free public use of the invention thereafter. Individual inventors, as distinguished from corporations and other business entities, ordinarily do not have the resources to manufacture products incorporating their inventions. Consequently, they must either assign their patent or license their patent to an entity, usually a corporation, which has the financial ability to manufacture. When an invention is first discovered, or even when the patent issues, it is difficult, if not impossible, to determine its fair value, which depends on the number of devices embodying the invention which can be sold and the price which can be obtained. As a result, it is difficult for an inventor and a manufacturer to agree at the outset on a fixed price, and the only sensible resolution from the standpoint of both is a royalty on each device which is sold. If the manufacturer can, after agreeing to pay the royalty, avoid paying it by challenging the validity of the pat-

patents there involved. *United States v. Singer Mfg. Co.* (1963), 374 U.S. 174, involved a conspiracy to restrain trade and monopolize an industry by collusive settlement of interference proceedings and subsequent misuse of the patent. In *Mercoid v. Mid-Continent Investment Co.* (1944), 320 U.S. 661, the Court held only that assuming that a patent was valid, it still could not be used to protect unpatented material. The issue of licensee estoppel was not even discussed. Thus, Lear's and the Government's reliance on the statement that the public interest is dominant in the patent system, although not disputed, cannot be read out of context to make it appear that the public interest requires abolition of the doctrine of licensee estoppel.

Thus, we return to the case of *Automatic Radio Mfg. Co. v. Hazeltine Research* (1950), 339 U.S. 827, where this Court, after first finding no patent misuse and distinguishing *Katzinger* and *MacGregor* as price fixing cases and *Mercoid* as a "tie-in" case, held that the licensee was indeed estopped under the general rule to challenge the validity of the licensed patents. Although Lear attempts to distinguish the *Hazeltine* case on the ground that the licensee pleaded only a partial failure of consideration, the opinion of this Court contains no discussion of that issue. Similarly, the Government's charge that this Court did not consider policies or precedents (p. 21) is unfounded, in that this Court, in rejecting the Government's broad attack on the doctrine of licensee estoppel, reaffirmed the doctrine based on the patentee's right under the patent laws to collect a royalty because, absent any patent misuse, the doctrine does not conflict with the anti-trust laws.

The Government does not dispute that this is the true holding of the *Hazeltine* case, and in the case at bar is only advancing the same arguments it made and lost in *Katzinger, MacGregor and Hazeltine.* As aptly stated in 4 Toulmin's Anti-Trust Laws, 212, §8.2, ". . . the Department of Justice disagrees with the Supreme Court and continues to bring suit on the same issues, hoping, with the change of personnel in the Court, and with new records before the Court, ultimately to prevail in its social and economic views."

Hazeltine is consistent with this Court's holding in *Kelly v. Kosuga* (1959), 358 U.S. 516, that "the overriding general policy . . . 'of preventing people from getting other people's property for nothing when they purport to be buying it' " prohibits a defendant, when sued for breach of contract, from resorting to the anti-trust laws as a defense, unless enforcement of the contract would also enforce the precise conduct made unlawful by the Sherman Act.

Thus, the *Hazeltine* case, *supra,* and *United States v. National Lead Co.* (1947), 332 U.S. 319, refutes Lear's argument that it violates the anti-trust laws to license a patent without including an unconditional termination clause, and its refinement of that argument that it violates the anti-trust laws to license a patent before it is held valid, as in both cases licenses of both patents and patent applications were held not to violate the anti-trust laws where validity had not been adjudicated.

If a licensor of a presumptively valid patent violates the anti-trust laws by receiving royalties when the patent is in fact invalid, or by licensing the patent before validity is adjudicated, then every licensor may be subject to a civil anti-trust suit by his licensee to re-

cover threefold the royalties paid (see *Perma-Life Mufflers, Inc. v. International Parts Corp.* (1968), ... U.S. ....), and may also be subject to criminal liability in a suit brought by the United States. Certainly, Congress did not intend this consequence, which would effectively prohibit all license agreements until the patent was held valid by this Court or by the courts of last resort in every jurisdiction.

Nor can Lear and the Government successfully argue that the public suffers if Lear has to pay Adkins accrued royalties because it has passed that royalty cost along to its customers in the form of an increased sales price.* Lear has already collected the royalty from the public for past sales, and to allow Lear to retain this royalty would unjustly enrich Lear at the expense of Adkins, who is in justice and equity entitled thereto, *Kinsman v. Parkhurst* (1955), 18 How. 289.

Although both Lear and the Government (p. 9) assert that Adkins was paid a fair salary for the invention and the royalty is a windfall, this ignores the first agreement, under which the royalty was payment for the creation and disclosure of invention, and Adkins' testimony in his deposition that because of the first agreement, he was not paid the normal salary which "that job would have called for," but, rather, as "Bill Lear termed it . . . 'coffee and cake money.' "[145]

As for future sales, the situation would be no different had Lear agreed to pay for the disclosure of the idea absent any patent, *i.e.*, precisely as Lear did in the letter agreement of December 29, 1951. Lear

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*There being no evidence that Lear reduced its price after it refused to pay royalties to Adkins.

[145]Dep. 194.

would be obligated to continue payments, *O'Neil v. E. I. duPont de Nemours & Co.* (1919), 21 Del. Ch. 76, 106 A. 50, and the public, which is ultimately receiving the benefit of the product, is being fairly charged therefor. If the royalty to Adkins were an unfair burden on the public, then Lear's profit over and above that royalty is an equally unfair burden. In short, the public is benefiting from the invention and is in fact receiving a greater benefit because it is patented, for the reason that after seventeen years it will be in the public domain, free of both patent protection and the license agreement.

Where, as in this case, the licensee freely enters into a license agreement for a reasonable royalty, and the true basis of the bargain is the disclosure of the invention in exchange for the right to use it, it cannot be said that the royalty imposes an unfair burden on the public. Rather, to the extent that the royalty increases the sales price, the public is paying a reasonable price for something it otherwise would not have. There is little, if any, difference in the inventor's collecting a royalty for creation and the manufacturer's collecting a profit from manufacture.

It is therefore submitted that under all of the facts of this case, the rule of licensee estoppel does not unfairly burden commerce and does not preserve an invalid monopoly, since the monopoly of the patent is not the basis of the bargain and the doctrine of licensee estoppel is being applied not to preserve the monopoly but to enforce the bargain of the parties and to preserve to Adkins the substance and value of his issued patent.

ent, assigning and licensing of patents, which has been recognized as the best way to implement patent rights from the public point of view (see Baxter, Legal Restrictions on Exploitation of the Patent Monopoly, 76 Yale L. J. 267 (1966)), will become a thing of the past. This would leave the inventor with only the right to sue for infringement, which is a notoriously expensive and protracted proceeding. Thus, unless the individual inventor knows that he can collect the agreed royalty by resort to the doctrine of estoppel, he can look forward only to expensive litigation which he might not be able to afford and might or might not win. This would clearly discourage the individual inventor from even trying to invent something new and useful, and would subvert the policy of the patent clause (Art. I, Sec. 8, Cl. 8), which is to "promote the progress of science and useful arts . . ." In addition, every inventor who has not yet applied for a patent and who knows that a licensee could at any time attack the validity of his patent would be wise to forego applying for a patent and keep his invention a trade secret unknown to the world for as long as possible by either secretly practicing the invention or by entering into a contract for payment for the disclosure of the unpatented invention, in which case the purchaser would do the same thing. This would also subvert the basic intent of the patent system, which is designed to encourage inventors to disclose their inventions and reward them for a limited period in exchange for the free right of the public to use the invention thereafter, *Brenner v. Manson* (1966), 383 U.S. 519.

2. This Court's Decision in the Hazeltine Case Affirming Licensee Estoppel Is Not in Conflict With Other Decisions of This Court.

Both Lear's and the Government's reliance on *Sola Electric Co. v. Jefferson Electric Co.* (1942), 317 U.S. 173, *Katzinger Co. v. Chicago Metallic Mfg. Co.* (1947), 329 U.S. 394, and *MacGregor v. Westinghouse Electric & Mfg. Co.* (1947), 329 U.S. 402, is totally misplaced. In all three cases the license contained a price fixing clause, which constituted a *per se* violation of the anti-trust laws unless the patent was valid. In such circumstances the public interest obviously requires that the licensee may test the validity of the patent. Therefore, Lear's quotation from *Katzinger* (p. 36) that the "way should be kept open for 'interested persons' to challenge validity" cannot be read out of context to apply to situations where no misuse of the patent exists. Similarly, Lear's and the Government's reliance on *Pope Mfg. Co. v. Gormully* (1892), 144 U.S. 224, is equally misplaced, in that both overlook the fact that this Court was not there considering the doctrine of licensee estoppel in the same context as it exists in the case at bar. The *Pope* case involved an agreement wherein the licensor licensed certain patents, fixed the licensee's sale price, prohibited the licensee from using other patents owned by the licensor, and forbade the licensee from contesting the validity of any of the licensor's patents. Although this Court considered whether the provisions not to contest validity violated public policy, it did so in this peculiar factual setting and did not decide that issue but affirmed the judgment denying an accounting and an injunction on the sole ground that equity would not enforce an unconscionable and oppressive agreement. Thus,

the *Pope* case was merely the forerunner to *Sola, Katzinger and MacGregor,* and does not stand for the proposition that licensee estoppel without any patent misuse violates the anti-trust laws.

In *Scott Paper Co. v. Marcalus* (1945), 326 U.S. 249, and *Westinghouse Co. v. Formica Co.* (1924), 266 U.S. 342, this Court in both cases estopped the defendant from contesting validity and held only that the defendant could resort to an expired prior art patent to show that he was building his device solely according to the teachings of that patent. This Court recognized in both cases that although the public interest in free use of expired patents requires this result, it also recognized that estoppel to question validity was not subject to the same considerations. Thus, the Government is wrong when it says, at pages 15-16, that the estoppel doctrine forecloses Lear's "free use of a technology" which is in the public domain, since Lear can always attempt to show that it is building the gyros in issue solely according to the teachings of a prior art patent and thereby avoid the royalty payments. Consequently, extraction of quotations from these cases on the issue of infringement, indulged in by both Lear and the Government, which are not applicable to the issue of estoppel to question validity, are not only misleading but also not in point.

In the *Hazeltine* case, *supra,* this Court recognized that the doctrine of licensee estoppel supports the policy of the patent laws, and that the anti-trust laws do not affect the doctrine unless the doctrine is being used to enforce some "misuse" or extension of the patent grant. The doctrine has been settled law since this Court's decision in *Kinsman v. Parkhurst* (1855), 18 How. 289.

As will now be shown, the remaining cases relied upon by Lear and the Government are not inconsistent but rather entirely consistent with *Hazeltine,* in that they either fix the limits of the proper use of the patent grant or carve out exceptions to the doctrine of licensee estoppel in situations where the license agreement extends the use of the patent grant in a manner which would constitute a misuse of the patent grant absent a valid patent.

Sears, Roebuck & Co. v. Stiffel Co. (1964), 376 U.S. 225, and *Compco Corp. v. Day-Brite Lighting Inc.* (1964), 376 U.S. 234, cited by both Lear and the Government, are completely distinguishable. In both cases this Court went no further than to abolish *State* unfair competition "passing off" theories which granted a property right to the plaintiff *after* the patent had been held invalid and thereby prevented copying by the defendant. *Sears* and *Compco,* of course, did not involve the doctrine of licensee estoppel. In fact, the rationale of *Sears* and *Compco* is precisely the same as *Scott* and *Westinghouse,* and hold only that once a patented device falls into the public domain, either by expiration of the patent grant or a holding of invalidity, anyone may copy it. In this case, however, the patent has not been held invalid (the trial court's opinion being a nullity just as if it had never existed, *Ponce v. Marr* (1956), 47 Cal. 2d 159), is presumptively valid, and is also property under the Federal patent laws, which require that a licensee be estopped to question validity in order to preserve the substance and value of the patent grant to the patentee.

The remaining cases cited by both Lear and the Government also concern misuse of the patent or

D. Judicial Abolition of the Doctrine of Licensee Estoppel Would Affect Thousands of Outstanding License Agreements, and if It Is to Be Abolished It Should Be Done Prospectively by Congress.

Judicial abolition of this well-established doctrine after more than one hundred years of existence* would indeed have grave consequences. Every licensee (who is presumed to contract with reference to the doctrine of estoppel, *United States v. Harvey Steel Co.* (1905), 196 U.S. 310) would automatically be granted an option either to pay the agreed royalty in accordance with his bargain or seek to avoid his bargain on the ground that the patent is invalid. If the licensee elects the latter course and the patent is held to be invalid, the licensee has thereby effectively breached his contract under

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**Kinsman v. Parkhurst* (1855), 18 How. 289, *Dale Tile Manufacturing Co. v. Hyatt* (1888), 125 U.S. 46, *Automatic Radio Mfg. Co. v. Haseltine Research* (1950), 339 U.S. 827. In addition to these cases, see, *e.g., Baker Oil Tools, Inc. v. Burch* (1934, Cir. 10), 71 F. 2d 31, *United Engineering & Foundry Co. v. Cold Metal Process Co.* (1934, Cir. 3), 68 F. 2d 564, *Chadeloid Chemical Co. v. Charles McAdam Co.* (1924, Cir. 2), 298 Fed. 713, 716 (dictum), *Chicago & A. Ry. Co. v. Pressed Steel Car Co.* (1917, Cir. 7), 243 Fed. 883, 887, *Platt v. Fire-Extinguisher Mfg. Co.* (1894, Cir. 3), 59 Fed. 897, 901, *Hall Laboratories v. National Aluminate Corp.* (1955, Cir. 3), 224 F. 2d 303, *Moore v. National Water-Tube Boiler Co.* (1897, Cir. N. J.), 84 Fed. 346, *Milligan v. Lalance & Grosjean Mfg. Co.* (1884), 21 Fed. 570, 572, Toulmin, Handbook of Patents, p. 513 (2d Ed., 1954), Rivise and Caesar, Patentability and Validity, p. 21 (1936), Ellis, Patent Licenses, §225 (3rd Ed., 1958). Licensee estoppel is also settled law in England; see Terrell and Shelley on the Law of Patents, p. 228 (1961), Fletcher Moulton on Patents (1913).

In an analogous area, licensees who have concluded a suit similar to this one with a consent decree have been unable to avoid later royalty payments even when the patent was later declared invalid in a suit involving a third party. See, *e.g., Lehman Co. of America v. Appleton Toy & Furniture Co.* (1945, Cir. 7), 148 F. 2d 988, *E. Ingraham Co. v. Germanow* (1925, Cir. 2), 9 F. 2d 912.

sanction of law. Although it is true that the licensee risks the statutory measure of damages for infringement if the patent is held to be valid, the election of whether to sue for the contractual royalty or the statutory measure of damages belongs to the licensor, not the licensee, *St. Paul Plow Works v. Starling* (1891), 140 U.S. 184. The abolition of the doctrine of licensee estoppel would render almost every existing patent license agreement (and there are doubtless thousands in existence) uncertain if it is subject to avoidance at any time at the election of the licensee, and would promote litigation concerning the validity of the patent in a situation where the parties have agreed at the outset to avoid such litigation. As the First Circuit held in *Automatic Radio Mfg. Co. v. Hazeltine Research* (1949, Cir. 1), 176 F. 2d 799, "It is not apparent to us that the public interest would be served by rendering such commonsense business settlements nugatory, which would be the result of a ruling that the licensee could reopen the issue of validity when sued for the stipulated royalty." Had a licensor known that the licensee could at any time challenge validity and thereby perhaps avoid his bargain, the licensor could have protected himself in many ways. First, he could have sold or licensed the invention as a trade secret, in which case validity would be irrelevant. Second, he could have exacted a higher royalty to compensate for the risk that invalidity would defeat his bargain. And third, he could have provided that if the licensee challenged validity and lost, the licensee would have to pay attorney's fees and other non-recoverable costs.

In this case the situation is even more aggravated. Had Adkins known that Lear could challenge the valid-

ity of his patent, he obviously would not have entered into the license agreement but would have enforced the letter agreement of December 29, 1951.

The doctrine of licensee estoppel has been the law of the land since this Court's decision in *Kinsman v. Parkhurst* (1855), 18 How. 289, and has been continuously reaffirmed by this Court. The impact of a decision retroactively overruling licensee estoppel on existing and future business relationships cannot be accurately estimated by this Court. How many license agreements are now in existence, how the network of business relationships built on licensee estoppel would be affected, whether the licensing of patents and the use of the patent system would come to an end, can only be determined by public hearings conducted by Congress. Moreover, Congress can act prospectively if it determines that licensee estoppel is inimical to a healthy and functional patent system. On the other hand, Congress might conclude that abolishing licensee estoppel would have disastrous economic consequences and would destroy the patent system. In this regard, although the patent laws have gone through many minor amendments and one major change since 1855, Congress has not abolished the doctrine of licensee estoppel, even though several bills, all in the form of amendments to the Clayton Act, were introduced in 1942 (H. R. 7713, S. 2730), 1943 (H. R. 3874) and 1945 (H. R. 97), and identical bills were introduced in both houses of Congress in 1945 and 1946 (H. R. 3462, S. 2482) to abolish the doctrine. Hearings were held on one such bill (1945, H. R. 97), where the Justice Department was the principal supporter and opposition was voiced by a broad range of interests, including the Commis-

sioner of Patents, corporations, patent law associations and members of Congress. Disastrous consequences were predicted for the quality of invention and the effect on the patent system and the network of business relationships built on patent license agreements. All of these bills died in committee.

Thus, Congress unquestionably knew of the existence of the doctrine of licensee estoppel and the assertion that it conflicts with the anti-trust laws, and its refusal to abolish it must be interpreted as some evidence of not only approval of the doctrine but also as a recognition that it does not interfere with the underlying policy of either the patent laws or the anti-trust laws. Consequently, if the doctrine is to be abolished, it is the function of Congress to do so. However, if this Court feels that judicial established doctrines are to be judicially overruled, then the doctrine of licensee estoppel should be overruled prospectively only, as explained in Point IV, *infra*, to avoid unnecessarily penalizing inventors who have relied on existing case law.

E. Lear Is Estopped by Its Bargain to Contest the "Patentability" of the Claims of the Application.

When Lear argues that it should be permitted to contest the "patentability of the claims" of the application, it is really only advancing its argument that under its construction of paragraph 6 of the agreement, it could unilaterally and incorrectly anticipate final Patent Office action, determine that no claims could issue, and terminate the license agreement. On this issue the California Supreme Court, in construing the license agreement, held that Lear could not do so.[146] That court's

[146]A-I, 183-184, 191, Pet. App. 20-21, 28.

decision on this State issue is obviously correct, and, in any event, cannot be redecided by this Court. Under paragraph 2(a) of the license agreement Lear accepted a license of the claims of the original application (even though, as Lear knew, those claims had been rejected and new and amended claims were pending),[147] which claims were defined in paragraph 1(b)[148] to include "the inventions disclosed or intended to be disclosed" in the specifications. No mention was made of the then pending claims of Amendment A or the possibility that those claims would be rejected and new or amended claims substituted. Thus, Lear bargained not for patentable claims in the application, but for the right to use the idea, discovery and invention disclosed or intended to be disclosed in the specifications until final Patent Office action and thereafter for claims which covered the invention. Lear did not receive the right either to terminate the agreement prior to final Patent Office action or to contest the "patentability" of the claims of the application. To the contrary, the claims of the application and any amended or new claims were totally irrelevant to the bargain. Consequently, under the agreement Lear freely and voluntarily entered into, it could not question whether the Patent Office would issue a patent with claims covering the invention.

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[147]R. T. 52.

[148]A-II, 4, Pet. App. 128.

F. Since the Doctrine of Licensee Estoppel Does Not Violate Either the Patent Laws or the Anti-Trust Laws, the Procedural Device of Repudiating and Standing Out From Under the License Agreement as a Means of Avoiding the Estoppel Should Not Be Permitted.

Initially, it is important to recognize that Lear never purported to repudiate and stand out from under the license agreement. On September 10, 1957,[149] and while Adkins' patent application was pending, Lear advised Adkins in writing that it did not consider that his invention was being used in the steel gyros and that it considered the invention unpatentable. Thereupon, Lear ceased paying royalties on the steel gyros but continued to account for royalties on the 2156 gyro. A refusal to pay royalties is not a termination or a repudiation but only a breach of contract, *White v. Lee* (1880, Cir. Mass.), 2 Fed. 222, especially where Lear only refused to pay royalties on the steel gyros and continued to account for royalties on the 2156 gyro. In other words, the refusal to pay royalties on the steel gyros was based on Lear's erroneous construction of the license agreement, upon which it relied. On April 8, 1959,[150] and when Adkins' patent application was still pending, Lear again wrote to Adkins and purported to terminate the license agreement pursuant to paragraph 2(a) and 6 thereof, and thereafter refused to pay any further royalties at all. Neither Lear's letter of September 10, 1957 nor its letter of April 8, 1959 made any mention that Lear was either repudiating or standing out from under the license agreement. To the

[149]Ex. 36.
[150]Ex. 39.

contrary, Lear attempted in both letters to exercise non-existent rights which it believed to exist under and pursuant to the terms and provisions of the license agreement. Thus, Lear was relying on the license agreement on both occasions and not repudiating or standing out from under it. Stated differently, Lear asserted at all times after April 8, 1959 that under the license agreement it had no further liability for royalties, and that under three agreements[150a] executed concurrently with the license agreement it owned the invention and could not be sued in the Federal court for infringement.[150b]

Even under those cases which permit repudiation in order to contest validity, an unequivocal notice of repudiation is required, *Martin v. New Trinidad Lake Asphalt Co.* (1919, D.C., N.J.), 255 Fed. 93. Consequently, Lear has not brought itself within those cases and the issue of repudiation is not present in this case. As the California Supreme Court held, Lear did not repudiate or terminate the license agreement, but, rather, both letters constituted only a breach of contract,[151] since Lear had agreed to pay royalties until final Patent Office action, which did not occur until January 5, 1960, and had further agreed to pay royalties thereafter if the issued claims covered the gyros in issue.

Lear nevertheless cites several cases (*Bucky v. Sebo* (1953, Cir. 2), 208 F. 2d 304, *Holmes, Booth & Haydens v. McGill* (1901, Cir. 2), 108 Fed. 238, *Mudgett*

[150a] R. T. 1503-1508.

[150b] "Reply Brief for Lear concerning the Directed Verdict and the Denial of Lear's Motion for Judgment Notwithstanding the Verdict All with Respect to the 2156 Gyro," 29-30.

[151] A-I, 191, Pet. App. 28.

v. Thomas (1893, C.C., Ohio), 55 Fed. 645, *Brown v. Lapham* (1886, C.C., N.Y.), 27 Fed. 77, and *Crew v. Flanagan* (1954), 65 N.W. 2d 878) for the *abstract* proposition that a licensee may repudiate and stand out from under the license agreement and is then freed from the estoppel doctrine in order to show that there is a total failure of consideration because the patent is invalid. As Lear states, there are cases to the contrary (*St. Paul Plow Works v. Starling* (1891), 140 U.S. 184, *Bowers Mfg. Co. v. All-Steel Equipment, Inc.* (1960, Cir. 9), 275 F. 2d 809, *Eastern States Petroleum Co. v. Universal Oil Co.* (1938), 22 Del. Ch. 76, 2 A. 2d 138) which apply the opposite and better rule. In the *St. Paul Plow Works* case, *supra,* this Court held that a licensee cannot "repudiate" the license and avoid the estoppel doctrine while continuing to manufacture devices covered by the patent, and if the licensee purported to do so, the licensor could, at his election, sue on the contract for royalties or terminate the contract and sue for infringement and statutory damages. Accord, *Automatic Radio Mfg. Co. v. Hazeltine Research* (1949, Cir. 1), 176 F. 2d 799. In the *Bowers* case, *supra,* the Ninth Circuit held that the licensee's procedural maneuver of purporting to repudiate the agreement in an attempt to thereby avoid the doctrine of estoppel to question the validity of his licensor's patent was unavailing and logically should not avoid the doctrine of estoppel. The court said, at page 812: "It is difficult to see why a procedural technicality such as this should create substantive rights in the licensee."

If a licensee, by the mere device of purporting to "repudiate" and stand out from under the agreement, could free himself from the doctrine of estoppel to ques-

tion the validity of the patent, the result would be the total abolition of the doctrine, which has been approved and applied consistently by this Court. This Court should not place form over substance and permit the licensee to accomplish by indirection what cannot be accomplished directly.

G. The Doctrine of Licensee Estoppel Is No Different Where the License Is Initially of the Invention Disclosed in a Patent Application Which Shifts to a License Under the Claims of the Issued Patent, Especially Where the Issued Claims Cover the Invention of the Application and the Invention of the License Agreement.

In construing the license agreement, the California Supreme Court held that Lear agreed to pay Adkins the stipulated royalty for the invention disclosed in the application, which Lear "agreed and understood" in paragraph 17 it was using in the 2156 gyro and the steel gyros, until final Patent Office action. That court further held that if a patent issued with claims covering the invention embodied in those gyros, Lear agreed to continue to pay the stipulated royalty. As that court also held, "the patented apparatus falls within the scope of the initial application, and because Lear has adapted it to its steel gyros, we must conclude that the patented apparatus was within the contemplation of the parties."[152] Thus, Lear received precisely what it bargained for and agreed to pay for. As a result, Lear's argument that the rule should be different because the licensor can expand his claims to cover something different than the invention the licensee intended to license is not in point, as Adkins did not expand his claims to

[152]A-I, 197, Pet. App. 34.

cover a different invention but obtained claims which covered the invention of the application, the invention of the license agreement and the invention Lear continuously used in all five gyros in issue.

Baldwin Rubber Co. v. Payne & Williams Co. (1939, Cir. 6), 107 F. 2d 350, and *Stubnitz-Greene Spring Corp. v. Fort Pitt Bedding Co.* (1940, Cir. 6), 110 F. 2d 192, both cited by Lear, afford the complete answer, in that the rule of licensee estoppel is not and should not be any different depending on whether the license originates under the application or under the patent, since the licensee can show (1) that the issued claims do not cover the invention which is the subject matter of the contract and/or (2) that he is building his device solely according to the teachings of the prior art. As the court said in the *Stubnitz-Greene* case, *supra,* at page 195, the licensee "is estopped to deny patentability. This rule is applicable as between a licensor assignor and licensee assignee whether either be a patentee or applicant only." Consequently, Lear's reliance on the *dictum* in *Westinghouse Co. v. Formica Co.* (1942). 266 U.S. 342, that "the range of relevant and competent evidence in fixing the limits of the *subsequent estoppel*" might be different where the assignment involved a patent application, an issue which the Court did not decide, need not be considered, as the issue was thereafter properly decided by the Federal courts.

IV.

IF, ARGUENDO, (a) LEAR IS NOT ESTOPPED TO QUESTION VALIDITY; (b) ADKINS' PATENT IS INVALID; AND (c) TOTAL FAILURE OF CONSIDERATION RESULTS, LEAR MUST, NEVERTHELESS, ACCOUNT FOR ALL ROYALTIES WHICH HAVE ACCRUED PRIOR TO A FINAL JUDGMENT OF INVALIDITY.

As stated *supra,* Lear, under the September 15, 1955 license agreement, in addition to taking a license of the invention disclosed in the application, which shifted to a license under the issued patent, also obtained a "cancellation" of the December 29, 1951 letter agreement under which its liability was far more sweeping, in that Lear was required to pay Adkins a mutually satisfactory royalty irrespective of the patentability of the idea, discovery or invention. The cancellation of this obligation by paragraph 13 of the license agreement clearly constituted additional and substantial non-severable consideration which, even absent a valid patent, supports Lear's agreement to pay royalties, *United States v. Harvey Steel Co.* (1905), 196 U.S. 310, *Patterson-Ballagh Corp. v. Byron Jackson Co.* (1944, Cir. 9), 145 F. 2d 786, *Del Riccio v. Photochart* (1954), 124 Cal. App. 2d 301, as Lear concedes in discussing the *Harvey Steel* case at page 37. (For other additional nonseverable consideration, see Point III, subd. A, *supra.*)

If, *arguendo,* this Court relieves Lear from the estoppel to question validity, finds the patent invalid, and further finds that invalidity constitutes a complete failure of consideration, the question then becomes whether the consideration fails *ab initio,* or when Lear breached the agreement, or when the patent is held invalid, either by the trial court or by a court of last re-

sort. As a matter of balancing the competing considerations of exposure of invalid patents and enforcing bargains freely and fairly made, elemental principles of equity as well as logic compel selection of the date upon which a court of last resort holds the patent invalid. Until the patent is held invalid, the consideration does not fail, since until that event occurs the licensee has received precisely what he bargained for and should pay for, that is, the right to manufacture under a presumptively valid patent, *Barber Asphalt Paving Co. v. Headley Good Roads Co.* (1922, D. C., Del.), 284 Fed. 177, 179. Moreover, this result would preserve to a licensee the opportunity and incentive to contest validity, since it would free him from further royalties and at the same time would enforce the bargain of the parties until the final result, thereby tempering the harsh effect of retroactive application which would destroy the bargain *ab initio*. This result would alleviate to some extent the unsettling effect of upsetting prior law on which inventors have relied. The Government concedes the fairness of such a rule at page 35 where the licensee in fact receives all he bargained for until the patent is declared invalid. In this regard, the license agreement states, in paragraph 6, that if the patent "is subsequently held invalid," Lear may terminate the agreement and is absolved of "further royalties." Although it can be argued that the cut-off date should be the trial court's decision, in the case at bar, the decision of the trial court that the patent was invalid, rendered on judgment *n.o.v.* and reversing a jury finding to the contrary, was reversed by both the District Court of Appeal and the California Supreme Court, and is therefore a nullity as if it had never existed, *Ponce v.*

Marr (1956), 47 Cal. 2d 159. As explained in Point V, *infra*, it was also erroneous as a matter of law, since the trial court redecided facts found by the jury on uncontradicted testimony. (Thus, the Government's statement (p. 15) that the trial court's ruling of invalidity was not disturbed on appeal is incorrect.)

Until the adjudication of invalidity is final, the licensee still enjoys the benefits of the protection of the patent, which prevents other manufacturers from practicing the invention. *Appleton Toy & Furniture Co. v. Lehman Co.* (1948, Cir. 8), 165 F. 2d 801. In addition, since the patent is *prima facie* valid and has all of the attributes of property, and similarly the license agreement is also property, to use any date other than final adjudication in a court of last resort would be to deprive the licensor of property without due process in contravention of the Fifth Amendment, *Lynch v. United States* (1934), 292 U.S. 571, 577. Finally, in the case at bar, to choose any date other than the final judgment of patent invalidity would clearly result in a windfall to Lear and thereby unjustly enrich Lear at Adkins' expense, *Kinsman v. Parkhurst* (1855), 18 How. 289.

Thus, in *Jungerson v. Kaysen* (1953), 173 Pa. 114, 95 A. 2d 347, the Pennsylvania Supreme Court held that a decision that a licensed patent is invalid does not operate *ab initio*, but, rather, causes an eviction as of the date of the final judgment, and that consequently the licensee must pay "royalties accruing prior to the declaration of invalidity." Accord, *Automatic Radio Mfg. Co. v. Hazeltine Research* (1949, Cir. 1), 176 F. 2d 799, *Wynne v. Allen* (1957), 245 N.C. 421, 96 S.E. 2d 422, *Barber Asphalt Paving Co. v. Headley Good Roads Co.*

(1922, D.C., Del.), 284 Fed. 177. As the court said in the *Hazeltine* case, *supra,* at page 809, the judgment of the trial court holding the patent invalid should not constitute an eviction excusing the payment of royalties, as "a holding by one lower court that a patent is invalid is hardly a conclusive determination of that patent's invalidity." This is obviously true, since the trial court can, of course, be reversed, *National Sponge Cushion Co. v. Rubber Corp. of California* (1961, Cir. 9), 286 F. 2d 731, *Triplett v. Lowell* (1936), 297 U.S. 638.

V.

IF, ARGUENDO, LEAR IS NOT ESTOPPED TO QUESTION VALIDITY, THEN ADKINS' PATENT IS VALID AS A MATTER OF LAW.*

A. Introduction.

Rule 23-1(c) of the Rules of this Court provide that only questions presented in the petition for a writ of certiorari and "subsidiary question[s] fairly comprised therein" may be considered. The broad question of validity, involving issues of anticipation, obviousness and the application of the constitutional standard for invention, are not within the questions presented in Lear's petition. The only question which Lear presented on the issue of validity was the alleged insertion of "new matter" in the specifications. This narrow question was presented in question 5 of Lear's petition and

*In its brief, at pages 49-81, Lear weaves back and forth between issues of validity and issues of infringement in a haphazard manner which makes it difficult to answer its arguments in the illogical order in which they are presented. Since validity and infringement involve some unrelated questions, Adkins will, in this Point V, cover validity in logical order and in Point VI will cover infringement, also in logical order.

discussed therein in Point III at pages 33-37. It is therefore submitted that this Court should limit itself to this narrow issue, which is considered in subd. B hereof, in conformity with Rule 23-1(c). Moreover, if the issue of the application of the constitutional standard for invention is reached on the merits, the case should be remanded to the California Supreme Court for a square ruling on this issue in accordance with the announced policy of this Court, *Abbott Laboratories v. Gardner* (1967), 387 U.S. 136, *Okla. Gas Co. v. Russell* (1923), 261 U.S. 290, as conceded by the Government in its *amicus* brief (p. 26).

Even if this Court does undertake to decide the issue of validity, the sole question under *Graham v. John Deere Co.* (1966), 383 U.S. 1, will not be whether Adkins' patent was anticipated or is obvious, but, rather, only whether the invention meets the constitutional standard for invention. As this Court said in the *Graham* case, *supra,* at page 674, the ultimate question of patent validity is one of law, but the issues of anticipation and obviousness are "basic factual inquiries," which, in this case, were decided by the jury. In *Chicago, Burlington etc. Rd. v. Chicago* (1896), 166 U.S. 226, 242-245, this Court held that under the Seventh Amendment, the United States Supreme Court may not retry facts which have been determined by a State court jury. In other words, where a jury has found that the patent is neither anticipated nor obvious, the Court must take the evidence and all proper inferences therefrom most favorable to validity and determine, based on that evidence only, whether the standard for invention has been satisfied, *Graham v. John Deere Co., supra, Oxnard Canners v. Bradley* (1952, Cir. 9), 194 F. 2d 655.

During the trial, which consumed many weeks, extensive expert testimony was introduced by both parties on the issue of the nature of the patented device, what results it accomplished and how it did so. Similarly, extensive expert testimony was introduced concerning the nature of each prior art patent, what results each accomplished and how each did so. In its brief, Lear concedes that this testimony was extensive (p. 55), and then proceeds, without even one reference or citation to the evidence, to state its own erroneous conclusions of fact on these factual issues, thereby totally ignoring the uncontradicted evidence to the contrary. In so doing, Lear ignores the California Supreme Court's summary of the uncontradicted evidence and relies heavily on the trial court's erroneous conclusions of fact for support, even though the California Supreme Court's reversal of the trial court results in the trial court's opinion being a nullity just as if it had never existed, *Ponce v. Marr* (1956), 47 Cal. 2d 159, 161.

However, since Lear in its brief covered every single factual issue involved in the question of validity, Adkins is required herein to review all of the evidence in order to show that Lear's factual conclusions are wrong and that based on the documentary evidence and the testimony in the record, the jury correctly found that Adkins' patent is neither anticipated nor obvious, and that based on that evidence, Adkins' patent satisfies the constitutional standard for invention.

Moreover, as will be seen, Adkins' invention is not the simple gadget immediately understandable to laymen, but is a highly sophisticated device, which, by employing a new cooperative relationship among pairs of three old elements, accomplishes precise coaxial and

parallel alignment of bearings in a way never before achieved, with results never before realized. Although anyone who can read cross section drawings can count the number of parts in Adkins' device and in the prior art patents, neither Adkins' patent nor the prior art patents elaborate on the cooperative relationship, which therefore both required and received expert testimony of those skilled in the art to explain. Similarly, expert testimony is required to explain why Adkins' device achieves a result which the prior art patents do not and cannot achieve. Although there are cases where this Court has decided issues of validity, *Great Atlantic & Pacific Tea Co. v. Supermarket Equipment Corp.* (1950), 340 U.S. 147, and infringement, *Singer Mfg. Co. v. Cramer* (1904), 192 U.S. 265, without resort to the testimony, the devices in question were of such simplicity that the issue was not how they functioned mechanically or what results they accomplished. Where, however, the issue is what the patent teaches, *Bischoff v. Wethered* (1869), 9 Wall. 812, or how the device functions mechanically and the results it accomplishes, *Loom Co. v. Higgins* (1881), 105 U.S. 580, this Court should not "essay an independent evaluation of this evidence," *Graver Tank & Mfg. Co. v. Linde Air Products Co.* (1950), 339 U.S. 605, particularly where the expert testimony of both Adkins' and Lear's witnesses is the same.

B. Amendment D Dated December 18, 1958 Did Not Add Any "New Matter."

Lear urges that Amendment D added "new matter" which (1) changed the invention from a method to an apparatus, (2) changed the invention to alignment of

bearing cups having replaceable bearings, (3) expanded the shape of the parts to include all shapes, and (4) changed the cooperative relationship of the parts to eliminate contact.

(1) Amendment D Did Not Change the Tenor of the Invention From a Method to an Apparatus.

In concluding that by Amendment D the invention was changed from a method to an apparatus, Lear wholly ignores claim 9 in the original patent application filed on February 15, 1954. Even Lear's witness, Mr. Ferrill, testified that claim 9 is an apparatus claim, stating:[153] ". . . the ninth claim, was an apparatus claim." Apparatus claim 9 was amended by Amendment A filed on March 9, 1955[154] and was still pending as an apparatus claim when the license agreement was executed. Thereafter, claim 9 was again amended on September 27, 1957[155] by Amendment B, was not changed by Amendment C filed on January 21, 1958 (which added five new apparatus claims), was again amended on December 30, 1958 by Amendment D,[156] and was finally canceled by Amendment E filed on March 4, 1959[157] and replaced with new and broader apparatus claims 29-36,[158] which issued as claims 9-16 of the patent on January 5, 1960.[159] Although the original specifications talked in terms of the "meth-

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[153]A-I, 64, R. T. 1286.
[154]A-II, 68, Ex. P, 37.
[155]A-II, 77, Ex. P, 45.
[156]A-II, 90, Ex. P, 60.
[157]A-II, 96, Ex. P, 64.
[158]A-II, 96-98, Ex. P, 64-66.
[159]A-II, 18, Ex. 10.

od of aligning,"[160] this was essential to teach others how to practice the invention. The drawing (Fig. 2),[161] of course, depicted a completed apparatus, which the original specifications describe as illustrating the "components [of] the invention,"[162] and in view of the fact that there was an apparatus claim in the application, that apparatus claims were pending in all amendments and that apparatus claims issued, it is somewhat difficult to understand Lear's assertion that the tenor of the invention was changed from a "method" to "method and apparatus." Rather, it is clear that Adkins always conceived of his invention as both a method and an apparatus and claimed it as both.

Lear's entire argument on this issue is that Amendment D added to the specifications the word "means" in column 7, line 65.[163] However, the word "means," when used as a shorthand description of several elements of a combination patent, is no broader than what is already disclosed, described and defined, and adds nothing to the patent which is not already there, *Henry v. City of Los Angeles* (1916, S.D., Cal.), 230 Fed. 457.

(2) The Original Specifications Always Contemplated Alignment of the Bearing Cups Without the Bearings in Place and Removable Bearings.

Amendment D added, in column 7, lines 70-72,[164] that the bearing cups may be aligned and the bearings

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[160]A-II, 36, Ex. P, 4, line 4.
[161]A-II, 64, Ex. P, 32.
[162]A-II, 38, Ex. P, 6, line 6.
[163]A-II, 18, Ex. 10.
[164]A-II, 18, Ex. 10.

are removable bearings. However, it cannot be denied that the *original* application and the drawing (Fig. 2) disclosed and depicted alignment of the bearing cups and removable bearings. The drawing in the original application (Fig. 2) always depicted element 63, the pair of bearing cups, which was defined in the original specifications[165] as "insert elements 63." The original specifications also state[166] that the mandrel "may be used to align the *holder* for the inner or outer races or both" (emphasis added). Thus, the original specifications use the words "inserts" and "holders" interchangeably to describe element 63, the bearing cups, and therefore the original specifications contemplate that the mandrel may be used to align either the bearing cups without the bearings in place or the bearing cups with the bearings in place. Even if the original specifications had not expressly stated that the bearing cups may be aligned without the bearings in place, this is so obviously an equivalent of placing removable bearings in the bearing cups and then aligning the cups that anyone skilled in the art would realize that one is a substitute for the other. What is an obvious equivalent of what is depicted and described is not new matter, *Application of Heinle* (1965, Ct. of Customs & Patent Appeals), 342 F. 2d 1001, *Engineering Development Laboratory v. Radio Corporation of America* (1946, Cir. 2), 153 F. 2d 523. In the *RCA* case the court said, at page 527, that "amendments which go no further than to make express what would have been regarded as an equivalent of the original [are not new matter]." Accord, *In re Wright* (1965, Ct. of Cust. & Pat. App.), 145 USPQ 182.

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[165]A-II, 50, Ex. P, 18, line 27.

[166]A-II, 37, Ex. P, 5, lines 28-30.

The original specifications also state[167] that "the inserts 63 are secured to the gimbal mounting sockets." There is nowhere in the original specifications any statement that the bearings are permanently secured. Since the original specifications contemplated only that the bearing cups be permanently secured in the bearing cup receiving holes, it is obvious that the specifications initially contemplated removable and replacable bearings. As Lear's witness put it,[168] removable bearings are the key to gyro design, which is something that is known to all skilled in the gyro art. Significantly, not one witness called by Lear testified that Adkins' original specifications did not contemplate removable bearings. Thus, Amendment D merely made express what was already disclosed. Again, as the court said in *Application of Heinle, supra,* an amendment to the specifications which does no more than further define what is already disclosed is not new matter. Therefore, the addition of the matter at column 7, line 67, to column 8, line 11,[169] which merely further explains the significance of removable bearings which were described in the original specifications and depicted in the original drawing, did not add any new matter as a matter of law.

(3) Amendment D Did Not Expand the Shape of the Parts by Adding the Words "Any Desired Configuration."

Lear complains that Amendment D added, in column 8, lines 28-31,[170] that the confronting surfaces of the

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[167]A-II, 51, Ex. P, 19, line 10.
[168]A-I, 65, R. T. 1733-1734.
[169]A-II, 18, Ex. 10.
[170]A-II, 18, Ex. 10.

bearing cups and receiving holes may be "of any desired configuration," and claims that this broadened the invention from a sphere in a cone or a sphere in a sphere to parts of any shape. However, the original specifications also state[171] that "other surfaces capable of being aligned and fixed in position such as a sphere in sphere, *knife edges or other devices* may be used without coming outside the scope of this invention" (emphasis added). The original specifications further stated[172] that "while the use of mating conical and spherical surfaces has been mentioned, it is apparent that other *similarly cooperating surfaces* can be used. For example, a spherical surface can be used with another spherical surface, and *other combinations* can be employed" (emphasis added). The original specifications further state[173] that although "a preferred form has been shown and described, it is to be understood that the invention is not to be restricted to the particular form and arrangement of parts herein described and shown." The expert witnesses testifying on this subject stated that the specifications do not *expressly*[174] or even by *implication*[175] require any one particular shape to accomplish the desired objective of precise coaxial and parallel alignment of a pair of bearing cups. To the contrary, they testified that the specifications contemplate *all* conceivable configurations,[176] and it is obvious that dozens of different

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[171]A-II, 37, Ex. P, 5, lines 25-28.
[172]A-II, 52, Ex. P, 20, lines 7-11.
[173]A-II, 52, Ex. P, 20, lines 24-26.
[174]R. T. 2354-2356, 2382.
[175]R. T. 2382.
[176]See fns. 174, 175.

cooperating configurations could be employed. It is significant that Lear, in attempting to convince this Court that Adkins' original application contemplated only a sphere in a cone or a sphere in a sphere, never once mentions the use of the words "or other devices" or "similarly cooperating surfaces" or "other cooperating surfaces," precisely because to do so would destroy its argument.

It is thus apparent that although Adkins' preferred embodiment was a spherical bearing cup and a conical receiving hole, Adkins expressly and from the beginning recognized that the shape of the parts was purely a matter of individual choice. The law is clear that an inventor must only set forth his preferred embodiment, and is not limited to the particular form or shape of the parts described in the specifications and shown in the drawings, *Reiner v. I. Leon Co.* (1960, Cir. 2), 285 F. 2d 501, 35 USC §112, *Chicago Pneumatic Tool Co. v. Hughes Tool Co.* (1938, Cir. 10), 97 F. 2d 945.

(4) Amendment D Did Not Change the Cooperative Relationship From a Contacting Ball in Socket Achieving Alignment by Universal Motion, Since the Original Specifications Always Contemplated Parts of Any Shape Which Would Cooperate to Permit the Parts to Tilt With Respect to Each Other.

Adkins' expert witnesses, Lee[177] and Comstock,[178] both testified that the specifications do not require contact but only cooperating parts. Even Mr. Ferrill, Lear's only witness on this subject, had to concede that the specifications[179] do not expressly require contact between

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[177]R. T. 2382-2384.

[178]R. T. 2356, 2358-2359, 2365.

[179]R. T. 1441.

the bearing cup and the receiving hole. In fact, the specifications do not even once use the word "contact" or state that contact has any function in achieving alignment. Despite this uncontradicted evidence, Lear relies on the phrase "the engaging spherical and conical surfaces". in column 2, line 58,[180] of the original specifications to require "contact" between the bearing cup and the receiving hole. However, the word "engaging" is obviously used only as a description of those parts as shown in Figure 2 of the patent, which, *like all assembly drawings,* does not show dimensions,[181] tolerances or clearances,[182] but uses one line for two adjacent parts even if they are not touching. For example, Lear's Assembly Dwg. 101478 of the 2152 steel gyro[183] uses one line for the surfaces of the bearing cup and the receiving hole even though the hole is concededly oversized. As the court said in *Manhattan Book Mach. Casing Co. v. E. C. Fuller Co.* (1912, D.C., S.D. N.Y.), 274 Fed. 964, at page 966, "diagrams or descriptions are not meant for working drawings." Even more important, Lear wrenches the word "engaging" out of context to make this argument. The entire phrase from which Lear extracts the word "engaging" is that "the engaging surfaces *permit* the bearing race axis to be *oriented in any direction*"[184] (emphasis added). The phrase "oriented in any direction" was not added by Amendment D but was part of the original specifications. Thus, if the bearing cup can be oriented "in

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[180]A-II, 18, Ex. 10.
[181]R. T. 1152, 1158.
[182]R. T. 1156, 1158.
[183]Ex. 23 [R. T. 359].
[184]A-II, 37, Ex. P, 5, lines 20-25.

any direction," *i.e.*, up, down, sideways or around, this is the antithesis of "contact" between the bearing cups and the receiving holes, as contacting parts cannot be oriented "in any direction."

Nor do the original specifications mention balls in sockets or universal motion. Again, the testimony of Adkins' and Lear's experts forecloses this argument. As Mr. Lee said,[185] the specifications do not require that a ball in socket joint is necessary to achieve coaxial and parallel alignment, nor does it require universal motion. Mr. Comstock's testimony[186] is the same. Even Mr. Ferrill conceded that Adkins' patent is not *expressly* limited to a class of devices such as a ball in a socket[187] or to accomplishing alignment by universal motion,[188] and, in fact, admitted that the specifications do "not mention what the action is at all."[189]

As Adkins testified, in the patented device the alignment of the bearing cups is achieved solely by tilting the cups, which have been coated with cement, with respect to their receiving holes, which have been similarly coated,[190] so that the alignment initially achieved is maintained, irrespective of the coaxial alignment of the receiving holes and irrespective of the parallel alignment of the end bells. Since Lear's counsel conceded this no less than three times,[191] and again concedes

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[185]R. T. 2382-2383.
[186]R. T. 2356, 2358-2359.
[187]R. T. 1433.
[188]R. T. 1433.
[189]R. T. 1430-1431.
[190]R. T. 2474-2475, 358.
[191]A-I, 64, R. T. 1039, A-I, 72, 2946, A-1, 72, 2975.

it here in its brief on the merits (p. 59 and fn. 24 on p. 69), there is no reason to belabor the point any further.

Although Lear also complains that Amendment D added approximately one-third to the specifications, except for the new language discussed above, the remaining language does no more than further explain the significance of the invention over the prior art and add additional uses to which the invention can be put. As a matter of pure logic, this cannot be new matter, since it does not change the nature of the invention in any way, *Interchemical Corporation v. Sinclair & Carroll Co.* (1944, Cir. 2), 144 F. 2d 842, 846.

Since the law does not require an inventor to distinguish over the prior art in the specifications, further explaining the advance over the prior art in an amendment is akin to arguments made to the patent examiner, which cannot be new matter. Explaining additional uses for the invention protects the public, since it gives notice of the range of applicability, *Schriber-Schroth Co. v. Cleveland Trust Co.* (1940), 311 U.S. 211, and therefore is also not new matter, *In re Solomon* (1943, Ct. of Cust. & Pat. App.), 58 USPQ 399, since the "patentee is entitled to the advantage of every use to which his invention is susceptible, whether the use is known or unknown to him."

Obviously, the Patent Office did not consider anything in Amendment D to contain any new matter, and its ruling is entitled to great weight, *Helms Products, Inc. v. Lake Shore Manufacturing Co.* (1955, Cir. 7), 227 F. 2d 677, *General Electric Co. v. Cooper Hewitt Electric Co.* (1918, Cir. 6), 249 Fed. 61, *Bald-*

win-Lima-Hamilton Corp. v. Tatnall Meas. Sys. Co. (1958, D.C., Pa.), 169 F. Supp. 1, affirmed 268 F. 2d 395. As the court said in the *Helms Products* case, *supra,* at page 679: "The fact that the Patent Office granted the patent in suit necessarily means that it did not consider the amendments to the application as 'new matter' within the meaning of its rules or of the Act. Since the Patent Office is constantly determining and defining what is or what is not new matter, its ruling on such questions is entitled to special weight."

Thus, Lear's entirely conclusionary argument (a) that Adkins committed a fraud on the Patent Office by inserting new matter and by filing an oath that it was not new matter; (b) that Adkins relied on new matter to obtain the issued claims; and (c) that the new matter had been in public use for over one year, is erroneous since, as a pure question of law, no new matter was added and the same claims could have issued on the original specifications. Although Lear accuses the California Supreme Court of ignoring this issue, that court was careful to point out that Adkins could not "enlarge the disclosure of the application as initially filed by adding new matter,"[192] and that the issuance of a patent "means that the Patent Office did not consider the amendment to constitute new matter in violation of the patent laws, and its determination in this regard is entitled to special weight."[193] That court then went on to hold that Adkins did not in fact add new matter, as "the patented apparatus falls within the scope of the *initial application*" (emphasis added).[194]

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[192]A-I, 168, Pet. App. 5-6.
[193]A-I, 169, Pet. App. 6.
[194]A-I, 197, Pet. App. 34.

Based on the foregoing, the California Supreme Court's conclusion is manifestly correct, as there is no need to consider the effect of new language if the claims are supported by the original specifications, *Ex Parte Nathan* (1963, Bd. of Pat. App.), 141 USPQ 439. Thus, that court's statement in footnote 35[195] that it is unnecessary to consider the issue of fraud on the Patent Office by adding new matter, upon which Lear places great emphasis, is only an alternative holding after the court in fact correctly decided the issue on the merits in Adkins' favor.

Moreover, the insertion of alleged new matter cannot possibly constitute fraud on the Patent Office. Whatever language is added to the specifications is not only disclosed but is also presented to the Patent Office for consideration as to whether or not it constitutes new matter, and is a decision which rests entirely on the original specifications and drawings. If the Patent Office is wrong and what is added does constitute new matter, this may invalidate the patent if the claims are based thereon. However, it cannot constitute fraud if the inventor honestly believes that it is not new matter. In this regard, Adkins' "priority drawing" dated August 25 and August 26, 1952, which discloses alignment of the bearing cups without the bearings in place and expressly contemplates all shapes of the parts, conclusively disproves any intentional misrepresentation. Nor, for that matter, has Lear pointed to any evidence whatsoever of any misrepresentation.

In short, the added language was not the afterthought of a clever patent attorney condemned by *Graham v.*

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[195]A-I, 209, Pet. App. 46.

John Deere Co. (1966), 383 U.S. 1, but was within Adkins' contemplation at the outset and also contained in other language in the original specifications. Stated differently, this type of polishing the specifications which adds nothing new is not "new matter." Therefore, Lear's citation of *Muncie Gear Works, Inc. v. Outboard, Marine and Mfg. Co., Inc.* (1942), 315 U.S. 759, is wholly inapposite, since there the inventor, more than two years after the application was filed, amended the claims to describe an invention having an entirely different combination than that originally contemplated in the specifications. *Precision Instrument Manufacturing Company v. Automotive Maintenance Machinery Company* (1945), 324 U.S. 806, cited by Lear, is also not in point. In that case the fraud which was held to bar the suit was the patentee's *actual* knowledge that the alleged inventor was not the true inventor and that the alleged inventor had falsified his priority date. The case at bar is not even remotely similar to the *Precision* case for the simple reason that nothing was concealed from the Patent Office, no misrepresentation was made to the Patent Office, and, more important, as a matter of law, no new matter was inserted in the specifications.

C. The Nature of Adkins' Patented Device, the Results It Achieves and How the Results Are Achieved.

Adkins' patented device utilizes a *permissive* cooperation among three concededly old elements, wherein a *pair* of bearing cups are prealigned on a mandrel and tilted into precise and accurate parallel and coaxial alignment *regardless of the parallelism of the end bells*[196]

[196] R. T. 1214.

and irrespective of the coaxial alignment of the receiving holes,[197] and then permanently fixed in place so as to permit pairs of bearings to be interchangeably mounted in aligned relationship without disturbing the alignment initially achieved.[198]

The elements of Adkins' patent and their new cooperative relationship can be restated as follows:

Elements:

1. A pair of bearing cups;
2. Frames providing a pair of bearing cup receiving holes;
3. Cement.

The New Cooperative Relationship:

1. The cups and the receiving holes may be of any desired configuration which permits the bearing cups
2. to be tilted to maintain coaxial and parallel alignment with each other,
3. irrespective of the parallelism of the end bells and
4. irrespective of the coaxial alignment of the receiving holes,
5. so that pairs of bearings may be inserted, removed and replaced in exact alignment without realigning any of the parts.

Consequently, it remains to be seen only that no prior art patent anticipates Adkins' invention, that Adkins' invention was not obvious because of any prior art patent, and that Adkins' invention satisfies the

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[197] R. T. 379-381.

[198] R. T. 1492-1493, 379.

constitutional standard for invention. As this Court said in *United States v. Adams* (1966), 383 U.S. 39, where there is evidence that the advance over each prior art patent, considered separately, is significant, and new and different results are achieved, the patent is valid. In commenting on this issue, the California Supreme Court said:[199]

> "In no respect was the prior art demonstrated to provide, by individual patent or collectively, a means of permanently fixing a pair of replaceable bearings in coaxial and parallel alignment. We cannot say, as urged by Lear, that the prior art disclosed a means by which it could accomplish substantially the same result, in substantially the same way by substantially the same means, as does the Adkins patent. Nor can we say that by the application of ordinary mechanical skills to the prior art, the same result may be accomplished. The prior art fails to anticipate the Adkins patent, or the utilization made thereof by Lear. Although the basic elements of the patent—bearing cups, and a means of attaching the cups—have heretofore been utilized in cooperation with each other, *Adkins nevertheless makes a significant step forward in the innovation and utilization of the cooperative relationship by which he employs these elements*" (emphasis added).

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[199]A-I, 201-202, Pet. App. 38.

FIGURE I.

	A pair of bearing cups and receiving holes	cement or other retaining means	permissive cooperative relationship of all three elements.	bearing cups aligned at same time	by tilting	permanently fixed bearing cups	achieving coaxial alignment irrespective of the alignment of the receiving holes	an pa re pa en
Adkins' patent	yes	yes	yes	yes	yes	yes	yes	ye
Schwan	yes	yes	no	no	no	yes	no	no
Moody	yes	no	no	no	yes	no	no	un
Grenat	no	yes	no (only 2 elements)	no (bearings are aligned at same time)	yes	no (bearings permanently fixed)	yes	ye
Sperry	no	no	no	no	no (bearing tilts)	no	yes	ye
Herr	no	no	no	no	no (bearing tilts)	no	yes	ye

	achieving co-axial alignment irrespective of the alignment of the receiving holes	and achieving parallelism irrespective of the parallelism of the end bells	removable bearings without re-aligning	Number of deficiencies
	yes	yes	yes	—
	no	no	yes	5
	no	unknown	yes	6
rings anently)	yes	yes	no	5
	yes	yes	no	7
	yes	yes	no	7

D. The Uncontradicted Evidence Showed Major Differences Between Adkins' Patent and Every Prior Art Patent, With the Result That Adkins' Patent Makes a Significant Step Forward and Satisfies the Constitutional Standard for Invention.

Before considering the prior art patents,* it is important to note that in addition to totally ignoring the testimony on which the jury found that Adkins' patent was not anticipated and not obvious, Lear also ignores (a) whether the cooperative relationship in each prior art patent is the same as in Adkins' patent, and (b) whether the prior art patentee accomplished the same result in the same way. Rather, Lear treats this question as if the only issue were whether or not a prior art patent has the same number of elements. Before the "prior art" can properly be said to anticipate, all of the elements must be found in a single prior art patent in the same cooperative relationship where they achieve the same result in the same way, *Bates v. Coe* (1879), 98 U.S. 31, 48; *Ry-Lock Company v. Sears, Roebuck & Co.* (1955, Cir. 9), 227 F. 2d 615, *Lincoln Stores v. Nashua Mfg. Co.* (1946, Cir. 1), 157 F. 2d 154. If this were not the rule, there could never be a patent on a combination of old elements.

To aid this Court, we have set forth in Figure I opposite this page a table showing not only whether the prior art patents have all three elements of Adkins' patent, but whether they also have all three elements in the same cooperative relationship where they accomplish

*It is presumed that Lear has abandoned the prior art patents to Carlson and Harding and the two Van Der Heem patents which Lear introduced into evidence and asserted in the California courts were relevant prior art.

the same results and in the same way. That chart reflects that there are at least five deficiencies in every prior art patent.

THE SCHWAN PATENT:[200]

Schwan states on the first page that his device is a "radially adjustable bearing support."[201] The stated purpose of the Schwan device is not to align the bearings but to correctly space the air gap between the rotor and the stator in an an electric motor.[202] Ferrill testified that the Schwan device permitted radial adjustment *only* and no tilting motion adjustment,[203] and that in the Schwan device the parallelism of the bearing cups was totally dependent upon the initial parallelism of the end plates,[204] which were accurately machined to be parallel.[205] These conclusions were concurred in by Mr. Lee.[206] As has been seen *supra,* radial adjustment is not a feature of Adkins' invention. Rather, Adkins' patent accomplishes alignment by tilting motion. Thus, as all witnesses testified, parallelism in Schwan is entirely dependent on the parallelism of the end plates, whereas in Adkins' invention parallelism is achieved regardless of the parallelism of the gimbal halves.[207] At the trial Adkins, using Exhibit 67, testified that using the Schwan patent in a gyro would

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[200]A-II, 121, Ex. A-31 [R. T. 1147].
[201]A-II, 123, Ex. A-31, 1.
[202]A-II, 123, Ex. A-31, col. 2, lines 30-35.
[203]R. T. 1464.
[204]R. T. 1463.
[205]R. T. 1460.
[206]R. T. 2390-2394.
[207]See fns. 190, 191.

Plaintiff's Exhibit 67.

SCHWAN
"67"

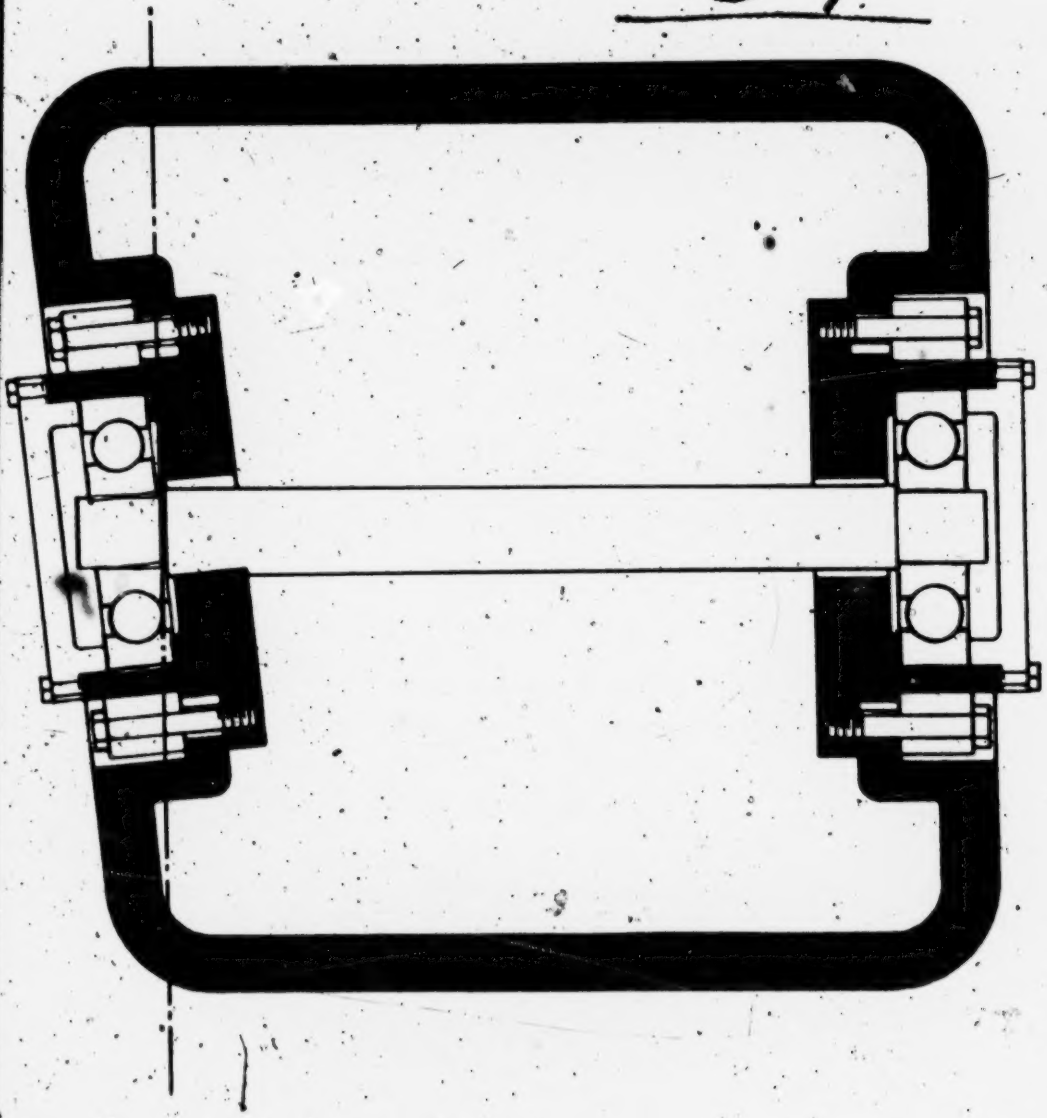


FIGURE II.

result in lack of parallelism and bearing binding if the end bells were not exactly parallel. Exhibit 67 is reproduced opposite in Figure II. It is thus readily apparent that Schwan cannot achieve parallelism irrespective of the parallelism of the gimbal halves, and thus leaves unsolved the very problem Adkins' invention solves successfully.

In Schwan there is also no permissive cooperation between the bearing cup and the receiving hole because the screws force the bearing cup tightly against the end plate.[208] In Adkins' device there is permissive movement between the bearing cup and the receiving hole before the bearing cups are permanently fixed in place in order to achieve parallelism irrespective of the parallelism of the end bells and coaxial alignment irrespective of the coaxial alignment of the receiving holes.[209]

In Schwan the bearing cups are moved radially one at a time to correctly space the air gap between the rotor and the stator,[210] which may or may not, and probably does not, result in coaxial alignment of the bearing cups. In Adkins' device both bearing cups are prealigned in precise coaxial relationship and tilted equally before being permanently affixed to the receiving holes.[211]

Thus, although Schwan has three elements, those elements do not have the same cooperative relationship and do not accomplish the same result. Consequently,

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[208]R. T. 2391-2392.

[209]See fns. 196, 197.

[210]R. T. 2391.

[211]R. T. 346-347, 1214, 1447.

Lear's Figures 4-I and 4-II, which depict only the parts separated and the parts assembled, misses the point that they do not have the same cooperative relationship and do not accomplish the same result.

The California Supreme Court fully understood the differences between Schwan's and Adkins' devices and said:[212]

> "The Schwan patent discloses a device for aligning the rotor of a motor. It provides for a bearing, a bearing cup, and a means of fixing the cup to the frame of the motor. In these respects it is similar to the Adkins patent. However, Schwan does not provide for angular tilt of the bearing cups, but rather for alignment of the bearings solely by the lateral movement of the cups. Parallelism is achieved in Schwan solely by the built-in parallelism of the surfaces to which the bearing cups are attached, whereas Adkins teaches that parallelism as well as coaxial alignment is to be achieved through the relative angular displacement of the bearing cups. Clearly, Schwan does not provide for the same kind or degree of cooperative relationship between the elements as Adkins, and does not accomplish the same result."

THE MOODY PATENT:[213]

Lee testified that in the Moody patent the bearing cups are not prealigned in precise coaxial and parallel alignment, as in Adkins' patent, but that each bearing cup is pressed into the frame, the device is then fully assembled and the bearing cups are then aligned sepa-

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[212]Pet. App. 37.

[213]A-II, 142, Ex. A-40 [R. T. 1157].

rately by striking each with a hammer[214] while turning the shaft to feel for bearing bind.[215] As he stated, there is never any way of ascertaining the precise degree of alignment achieved,[216] and, moreover, once aligned in this matter, the bearing cups can be disaligned in the same way.[217] It is also apparent that each is not only aligned independently of the other, but also to a different and unmeasurable degree of alignment. Mr. Ferrill fully concurred with Mr. Lee in this position.[218] Thus, the bearing cups in Moody are not "permanently and immovably" fixed in position as in Adkins' patented device. Also, it is obvious from the Moody patent itself, and conceded by Ferrill,[219] that in Moody there is no cement—the third element in Adkins' invention. In other words, in Moody there is only a *required* cooperation between two elements—the bearing cup and the receiving hole, the required cooperation being the fit between the cup and the hole. In Adkins' patented device, there is an initial permissive[220] cooperation between all three elements, as the fluid cement permits the bearing cups to tilt in the oversized receiving holes[221] and then hardens to fill up the space. Lear seeks to disguise the fact that Moody does not have the third element—retaining means—by drawing a line in Figure 4-I and 4-II to the

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[214]R. T. 2396-2399.
[215]R. T. 2398.
[216]R. T. 2397-2398.
[217]R. T. 2398.
[218]R. T. 1472-1477.
[219]R. T. 1480.
[220]R. T. 2376-2377.
[221]R. T. 2506-2508.

point where the frame meets the bearing cup and calling it a third element. In addition, not one witness, expert or otherwise, stated that a gyro, which requires extreme precision in manufacture to achieve an accurate instrument, could be produced by a method as crude as striking the parts into an unmeasurable degree of alignment with a hammer.

Although Mr. Ferrill did conclude, in response to a leading question, that Moody is a full anticipation of Adkins' patent,[222] his conclusion is not supported by any stated reason, and his recognition of the distinction between the two devices fully destroys his conclusion and results in his testimony falling within the rule of *Diamond Rubber Co. v. Consol. Tire Co.* (1911), 220 U.S. 428, 435, that expert testimony concluding anticipation by application of hindsight can always be produced and is entitled to no weight at all.

The trial court's conclusion[223] in its opinion that to enlarge the receiving holes in Moody and then provide cement as a third element is obvious (the court says "anticipated" but clearly means obvious) and thus to change a required relationship between two elements to a permissive relationship among three elements, usurps the function of both the expert witness on a subject of expertise and the prerogative of the jury. The conclusion of the trial court on the Moody patent is exactly the type of hindsight that the courts have frequently cautioned against, *Monroe Auto Equipment v. Heckethorn Mfg. & Sup. Co.* (1964, Cir. 6), 332 F. 2d 406. As the court in the *Monroe* case said: "Many

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[222]R. T. 1365.

[223]A-I, 78, Pet. App. 98.

things may seem obvious after they have been made, and for this reason courts should guard against slipping into use of hindsight. We must be careful to 'view the prior art without reading into that art the teachings of appellant's invention.'" A similar statement appears in *United States v. Bell Telephone Company* (1896), 167 U.S. 224, where this Court said, at page 261: ". . . wisdom born after the event is the cheapest of all wisdom. Anybody could have discovered America after 1492."

Again the California Supreme Court recognized the distinctions over Moody, saying:[224]

> "In the Moody patent, bearings and bearing cups are fitted into a shaft of a rotor and mounted by means of a press fit into a frame. The press fit is loose enough to permit the bearings to assume the alignment of the shaft when tapped with a hammer. Unlike Adkins, Moody does not provide for a prealignment of the bearings prior to the mounting of the shaft, does not permanently fix the bearing cups in position, and does not allow for removal and replacement of bearings without realignment thereafter."

THE GRENAT PATENT:[225]

Although Mr. Ferrill[226] and Mr. Lee concurred in the viewpoint that Grenat permitted initially achieved parallel and coaxial alignment, both also agreed that a pair of bearing cups was lacking, as Grenat does not

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[224]A-I, 201, Pet. App. 37.

[225]A-II, 118, Ex. A-27 [R. T. 1138].

[226]R. T. 1480-1481, 2399-2401.

employ bearing cups at all.[227] Thus, one of the three elements of Adkins' patent is totally missing in Grenat. In addition, because Grenat does not have bearing cups, a pair of bearings cannot be interchangeably mounted without disturbing the alignment initially achieved and requiring realignment of all of the parts. As has been seen, a major stated objective of the Adkins patent is to permit bearings to be removed and replaced without requiring total realignment of all of the parts.[228] As Lear's own witness put it, the interchangeability of bearings without total realignment of the parts "is the key to the whole gyro design.[229]

In other words, Grenat concededly does not have a pair of bearing cups, and thus the bearings cannot be interchanged without total realignment of all of the parts. Again, the trial court's conclusion that "this device anticipates every feature of plaintiff's patent"[230] ignores the uncontradicted testimony that one element —the pair of bearing cups—is not present in Grenat. There is not one word of testimony in the record that to add bearing cups to Grenat and use an accurately tooled mandrel which is removed, rather than a shaft which is not tooled for precise accuracy and which is an integral part of the motor, was obvious to anyone skilled in the art. Thus, Lear's argument on page 58 of its brief on the merits that Grenat uses a mandrel is wrong, and its further argument that if a sleeve bearing were put inside the sleeve bearing, the outer sleeve bearing would be a bearing cup, is again the type

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[227]R. T. 1480-1481, 2399-2401.

[228]A-II, 23, Ex. 10, col. 7, lines 71-73.

[229]R. T. 1733-1734.

[230]A-I, 78, Pet. App. 97.

of invention by hindsight condemned by the *Monroe Auto* case, *supra.*

Lear's final argument on Grenat (p. 58) is not only ludicrous but also concedes that Grenat is not relevant prior art. Lear states that Grenat anticipates Adkins' apparatus because the bearing cups and the bearing are formed together, rather than being separate pieces as in Adkins' device. In other words, Lear is saying that in Grenat the bearing is also a bearing cup. Grenat does not so state, but calls the element a "bearing."[231] Thus, Lear's Figures 4-I and 4-II, which identify the bearing as a bearing cup, are flagrant misrepresentations.

As the California Supreme Court correctly and succinctly stated,[232] ". . . in Grenat, parallel and coaxial alignment is initially achieved, but bearing cups are not utilized, and bearings cannot be interchanged without disturbing the alignment."

THE SPERRY PATENT:[233]

Mr. Lee testified[234] that the Sperry patent described a self-aligning structure, referred to by the patentee as "universally mounted,"[235] with the result that part 104, which Sperry, the patentee, and Mr. Lee called an "outer race"[236] and which Mr. Ferrill called a bearing cup (but admitted that the patentee called it an outer race),[237] was not immovably and permanently fixed

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[231] See fn. 190.
[232] A-I, 201, Pet. App. 37-38.
[233] A-II, 152, Ex. A-51.
[234] R. T. 2402-2405.
[235] A-II, 156, Ex. A-51, p. 2, col. 1.
[236] R. T. 2404.
[237] R. T. 1483.

but allowed to self-align while the device was operative. Although Ferrill testified that part 6 on Figure 11 *could* be tightened down to eliminate the "self-aligning" features of the bearing structure, he was forced, on cross-examination, to concede that the patent did not so teach,[238] and that to tighten down that part would be contrary to the patentee's stated object[239] of "universally mounted." Thus, even assuming, *arguendo,* that the outer race[240] is properly described as a bearing cup (which it is not, as a patentee is his own lexicographer and grammarian, *Thurber Corp. v. Fairchild Motor Corp.* (1959, Cir. 5), 269 F. 2d 841), the Sperry bearing cups are not tilted into precise coaxial and parallel alignment or "permanently and immovably" secured in position by cement, but, under the *uncontradicted testimony,* are allowed to remain loose for purposes of self-alignment.

As Mr. Lee said on cross-examination,[241] to assume that the patentee means a bearing cup when he says an outer race, and further assume that the device is tightened to permanently fix the bearings when the patentee states they are universally mounted, are both contrary to the patentee's teachings[242] and assumptions which he could not make.[243] It is obvious even to the nonexpert that a self-aligning assembly which contemplates a freemoving part is completely foreign to the teachings of "permanently and immovably" fixed bearing cups which are prealigned in precise coaxial and

[238]R. T. 1491.
[239]R. T. 1488.
[240]A-II, 154, Ex. A-51, fig. 12, No. 104.
[241]R. T. 2420-2424.
[242]R. T. 2422.
[243]R. T. 2423.

parallel relationship. The difference is basic. This alone distinguishes Sperry, since the result sought, alignment, is accomplished, if it is, in a totally different way. As this Court held in *United States v. Adams* (1966), 383 U.S. 39, "a completely different type" of device is not relevant prior art. Although Lear argues (p. 58) that part 6 could be tightened down to eliminate the self-aligning features of Sperry's device, its own witness, Ferrill,[244] admitted that the patent did not so teach, which Lear also admitted at page 321 of its "Respondent's and Cross-Appellant's Opening Brief," and which is obvious anyway since the patentee's stated object is "universally mounted" bearings.

Thus, Sperry does not have either bearing cups or a retaining means and operates on a completely different principle.

The trial court's treatment of Sperry failed to appreciate even the elementary difference between a constantly self-aligning bearing assembly and a permanently fixed bearing structure. However, the California Supreme Court recognized that Sperry is self-aligning and therefore not relevant prior art by stating:[245] "In Sperry . . . 'a universally mounted bearing' is utilized which constantly adjusts itself to maintain alignment while in operation. It thus does not provide fixed coaxial and parallel alignment."

THE HERR PATENT:[246]

The Herr device is an "oscillating electric motor"[247] employing a conically pointed shaft riding in hemis-

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[244]See fn. 238.

[245]A-I, 201, Pet. App. 38.

[246]A-II, 148, Ex. A-45 [R. T. 1162].

[247]A-II, 149, Ex. A-45, 1, R. T. 2387.

pherical bearings which ride directly on a conical receiving hole in the frame.[248] This device is also a self-aligning assembly.[249] Both Lee and Ferrill conceded that the Herr device does not have a pair of bearing cups[250]—nor does it have a retaining means[251] and that it is a self-aligning structure.[252]

Thus, in the Herr device, by uncontradicted testimony, two of the three elements called out in Adkins' patent, namely, a pair of bearing cups and the means to retain those cups, are absent, and, in addition, the device, like Sperry, is self-aligning. In final argument to the jury, Lear's counsel conceded the inapplicability of the Herr device as relevant prior art,[253] yet here Lear says Herr "is very similar to Adkins' structure" by again misrepresenting both at page 57 and in Figures 4-I and 4-II that the bearing is a bearing cup. Lear's further statement that Herr affixes "these elements" (which elements it does not say) is not understood, since Lear conceded at pages 181 and 316 of its "Respondent's and Cross-Appellant's Opening Brief" that the parts in Herr "are left to be self-aligning."

In its opinion the trial court, in describing Herr, stated:[256] "[T]he bearings are free to adjust themselves to the axis of rotation precisely in the manner of plaintiff's," thus again completely missing the point that Herr is a self-aligning device. Here also the Cali-

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[248]R. T. 2387-2389.
[249]R. T. 2388.
[250]R. T. 1472.
[251]R. T. 1472.
[252]R. T. 1470.
[253]R. T. 2969.
[256]A-I, 78, Pet. App. 98.

fornia Supreme Court[257] recognized that Herr is not relevant prior art because it is a self-aligning structure which does not provide "fixed coaxial and parallel alignment."

It is significant that in explaining the mechanical operation of all devices in issue, including the prior art patents, the only witnesses called by Lear, even though Lear obviously has qualified engineers and patent attorneys in its employ, were Mr. Carpenter, its chief draftsman,[258] who, Lear's counsel stated in response to an objection, was not an expert,[259] and Mr. Ferrill, a patent lawyer from Philadelphia, who, by his own testimony, had little experience in gyro mechanics[260] and had never before testified as an expert.[261]

Thus, none of the prior art patents, when properly analyzed, as the expert witnesses did at the trial, either anticipates or makes Adkins' patent obvious. It bears repeating that except for Ferrill's bare conclusion that Moody anticipates Adkins' invention, which has already been considered *supra,* not one Lear witness in almost three months of trial concluded that Adkins' device was either obvious or anticipated or that any prior art patent contained all three elements of Adkins' patent in the same cooperative relationship.

Put in the language of *Great Atlantic & Pacific Tea Co. v. Supermarket Equipment Corp.* (1950), 340 U.S. 147, exact coaxial and parallel alignment independent

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[257]A-I, 201, Pet. App. 38.
[258]R. T. 620.
[259]R. T. 1210.
[260]R. T. 1388.
[261]R. T. 1275.

testimony of five witnesses[272] that *angular tilt* is the motion which accomplishes alignment in the steel gyros. In so doing, Lear again ignores the California Supreme Court's summary of the testimony and relies on the trial court's erroneous factual conclusions for support. Thus, because Lear has covered every single issue relating to infringement, Adkins is required to review herein all of the testimony in order to show that Lear's and the trial court's factual conclusions are wrong and that the jury correctly found that the steel gyros infringe Adkins' patent based on the uncontradicted evidence.

B. As a Matter of Law, There Is No File Wrapper Estoppel Which in Any Way Limits or Narrows the Scope of the Claims of Adkins' Patent.

The doctrine of file wrapper estoppel prohibits a patentee in an infringement action from attempting to regain by claim construction what he has voluntarily eliminated from the *same* claim by amendment in order to avoid a rejection by the Patent Office. That doctrine also prohibits a patentee from attempting to regain by claim construction what has been eliminated from *other* claims, *Schriber-Schroth Co. v. Cleveland Trust Co.* (1950), 311 U.S. 211. In both situations the issued claim is ambiguous and the patentee is claiming it covers what he voluntarily eliminated in order to obtain the claim. However, the doctrine of file wrapper estoppel is inapplicable where the patentee cancels claims which he has narrowed to avoid a rejection and replaces them with new and broader claims which do not

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[272] A-I, 70, R. T. 2377-2378, A-I, 70, R. T. 2271-2272, A-I, 64, R. T. 1428, A-I, 64, R. T. 1212, A-I, 56, R. T. 347, A-I, 56, R. T. 358-359, A-I, 57, R. T. 370, A-I, 57, R. T. 375.

have any of the limitations previously inserted to avoid a rejection, and the new and broader claims issue, *Smith v. Snow* (1934), 294 U.S. 1, *Westinghouse Electric & Mfg. Co. v. Condit E. Mfg. Co.* (1911, Cir. 2), 194 Fed. 427, *Joints, Inc. v. Garret* (1952, D.C., S.D., Cal.), 102 F. Supp. 760.

In this case original claim 9, filed on February 15, 1954, "was an apparatus claim"[273] claiming a "structure" which did not impose any shape limitations on the bearing cups or receiving holes. Amendment A, filed on March 9, 1955, amended claim 9 but also did not impose any shape limitations.[274] Amendment B, filed on September 27, 1957, again amended claim 9 to require the bearing cup to be "convex" and the receiving hole to be "concave."[275] Amendment C, filed on January 21, 1958, did not change claim 9 and added claims 22-26, some of which referred to the receiving member as having "generally circular apertures."[276] Amendment D, filed on December 30, 1958, further amended claim 9 to remove the convex-concave limitation.[277] Amendment E, filed on March 4, 1959, cancelled claim 9 and claims 20-26 and substituted *broader* apparatus claims 29 to 36,[278] which issued as claims 9-16. Issued claim 9 imposes no shape limitations whatsoever on the bearing cups or the receiving members, but provides only that the bearing cup and its receiving member "generally correspond," which cov-

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[273]R. T. 1286.
[274]A-II, 69, Ex. P, 37.
[275]A-II, 77, Ex. P, 45.
[276]A-II, 81-85, Ex. P, 49-53.
[277]A-II, 92, Ex. P, 60.
[278]A-II, 96, Ex. P, 64.

ers all possible shapes and configurations, including concave, convex, circular holes, flat surfaces, etc. As Mr. Comstock said,[279] the phrase "generally corresponds" in claim 9 is about as broad a term as one can use, and does not envision any configurational limitations. Lee fully concurred.[280] Claim 9 eliminated the convex, concave and circular aperture restrictions from previous claims, and thus the rule of *Smith, Westinghouse* and *Garrett, supra,* is squarely applicable and results in no file wrapper estoppel as a matter of law.

Even if the convex-concave limitation of Amendment B and the "generally circular aperture" limitation of Amendment C were to be read into claim 9, this would still not prevent claim 9 from covering the steel gyros, which have convex bearing cups which fit into circular apertures in the gimbal.

The California Supreme Court states[281] in its opinion that "claims which have been allowed cannot, under the doctrine of file wrapper estoppel, be held to cover what has previously been eliminated from the patent application in order to avoid a rejection," and went on to hold[282] that "the record does not support" Lear's contention that a file wrapper estoppel exists in the case at bar because the term "generally corresponds" in claim 9 "contemplated all configurations,"[283] including those employed in the steel gyros, and that therefore "the accused apparatus falls within the literal

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[279]R. T. 2368.
[280]R. T. 2385-2386.
[281]A-I, 192-193, Pet. App. 29.
[282]A-I, 197, Pet. App. 33.
[283]A-I, 196, Pet. App. 33.

language of the claim,"[284] citing *Graver Tank & Mfg. Co. v. Linde Air Products Co.* (1950), 339 U.S. 605.

In other words, there is no ambiguity in claim 9 and no interpretation or construction of claim 9 is necessary, as the term "generally corresponds" covers all shapes, including the cylindrical receiving holes and the cylindrical flanged bearing cup used in the steel gyros. Therefore, Adkins is not trying to construe claim 9 to include something which was eliminated and there is no need to examine the rejected, amended or cancelled claims.

Consequently, the California Supreme Court was correct in holding that there is no file wrapper estoppel in this case.

C. The California Supreme Court Did Not Read the Mandrel or the Rejected Method Claims Into Claim 9 and Applied the Claims and Not the Apparatus to the Steel Gyros.

In Point V, subdivisions 3 and 4, it was shown that the specifications do not limit claim 9 to any particular configuration of the bearing cups or receiving holes or to contacting parts, but, to the contrary, contemplate all shapes which allow the bearing cups to cooperate and tilt with respect to the receiving holes to accomplish the desired coaxial and parallel alignment. Thus, the California Supreme Court correctly concluded that no limitation can be read into the words in claim 9 that the two surfaces "generally correspond," and therefore claim 9 covers the steel gyros by its literal language.

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[284] A-I, 197, Pet. App. 33.

of the structure and bearings which are removable constitute the novelty which makes the whole exceed the sum of its parts and produces new and useful results. As the California Supreme Court put it, Adkins' patent makes a "significant step forward in the innovation and utilization of the cooperative relationship by which he employs these elements,[262] which satisfies the standard for invention under *Graham v. John Deere Co.* (1966), 383 U.S. 1.

E. Every Presumption Supports the Validity of Adkins' Patent.

The advent of the jet aircraft, with increased speed capabilities, created an urgent need for a low cost gyro of higher accuracy.[263] It was therefore important for Lear to obsolete its aluminum gyros as soon as possible and before its competition from Bendix, Sperry[264] and other companies, who were constantly experimenting to develop a gyro of greater accuracy which could be produced at lower cost,[265] did so. After six months of constant experimentation, and in mid-1952,[266] Adkins solved the problem by inventing his bearing alignment structure which reduced free drift errors from more than 17° per hour on Lear's most accurate aluminum gyro[267] to less than 2° degrees per hour,[268] and also resulted in a substantial reduction in the cost of manufacture.[269] The importance

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[262]A-I, 202, Pet. App. 38.
[263]R. T. 2444, 2141-2142.
[264]R. T. 2141-2142.
[265]R. T. 2141-2142.
[266]R. T. 306.
[267]R. T. 290, 2545-2546.
[268]R. T. 2546.
[269]R. T. 2178-2179, 1784, 2544-2545.

of the solution achieved by Adkins is demonstrated by its use by Schoeppel's group in Grand Rapids in the steel gyros in October of 1953[270] after a year and a month of full-time and unsuccessful experimentation.

It has often been held that strong evidence of invention which clearly rebuts a defense of obviousness is the satisfaction by the invention of a long-felt want in the industry to which the invention pertains, *Goodyear Tire & Rubber Co., Inc. v. Ray-O-Vac Co.* (1944), 321 U.S. 275, 279.

Furthermore, Lear's gyro products incorporating Adkins' invention amassed sales in the period of January 1, 1955 to May 31, 1963 which exceeded $67,000,000.00,[271] and also substantially reduced manufacturing costs by eliminating the need for expensive machinery and skilled workmen. In *National Sponge Cushion Co. v. Rubber Corp. of Cal.* (1961, Cir. 9), 286 F. 2d 731, the court, in considering the question of obviousness, stated that where a device reduces manufacturing costs and enjoys great commercial success, this is also some evidence of actual invention, rather than only the work of a mechanic skilled in the art.

Moreover, Adkins achieved his invention only after he abandoned the conventional approach of improving known self-aligning constructions. In *United Shoe Mach. Corp. v. Industrial Shoe Mach. Corp.* (1964, Cir. 1), 335 F. 2d 577, the court held that where an inventor takes a new approach and is successful, this is also

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[270]R. T. 1763.

[271]Ex. 48 [R. T. 874], Ex. 49 [R. T. 875].

some evidence of an invention which meets the requisite constitutional standard.

It should also not be forgotten that once Lear copied Adkins' invention in the steel gyros, it used his invention to the exclusion of all prior constructions for the entire 7½-year period involved in this suit, which is also potent evidence of invention, *Mott Corporation v. Sunflower Industries, Inc.* (1961, D.C., Kan.), 217 F. Supp. 559, as is the fact that Adkins' invention substantially replaced the prior art then in use, *Minerals Separation, Ltd. v. Hyde* (1916), 242 U.S. 262, 270.

As this Court stated in *Graham v. John Deere Co.* (1966), 383 U.S. 1, these presumptions, or "secondary considerations," although, of course, not controlling, have some value in determining the question of validity.

VI.

THE STEEL GYROS INFRINGE CLAIM 9.*

A. Introduction.

Just as the broad question of validity is not a question presented or a "subsidiary question" under Rule 23-1(c), so also, the broad question of infringement is not a question presented or a "subsidiary question" except for the limited issues of whether the California Supreme Court properly applied the doctrine of file wrapper estoppel, properly construed the claims of Adkins' patent to exclude the mandrel and the rejected method claims, and properly applied the doctrine of equivalents, which were the only issues Lear raised in

*And also claims 13, 14 and 16, which need not be considered if claim 9 covers the steel gyros.

question 5 of its petition for a writ of certiorari and discussed in Point III, pages 33-37 thereof. Therefore, in conformity with Rule 23-1(c), this Court should limit itself to these issues and not reconsider (a) the factual question of whether the claims cover the accused device, *Coupe v. Royer* (1895), 155 U.S. 566, or (b) the factual question of whether the claims cover the accused device under the doctrine of equivalents, *Graver Tank & Mfg. Co. v. Linde Air Products Co.* (1950), 339 U.S. 605, or (c) the factual questions of the nature of the prior art patents, what results they accomplish and how they do so, *Graham v. John Deere Co.* (1966), 383 U.S. 1. Not only are these factual issues not within the questions presented, but also, the jury decided all of them in Adkins' favor. Therefore, this Court should not, under the Seventh Amendment, retry these factual questions, *Chicago, Burlington etc. Rd. v. Chicago* (1896), 166 U.S. 226, 242-245, unless there is no evidence or inferences therefrom to support the verdict, *Oxnard Canners v. Bradley* (1952, Cir. 9), 194 F. 2d 655. In this regard, the California Supreme Court found that *all* of the uncontradicted evidence supported the verdict.

Extensive expert testimony was introduced on the issues of what the specifications taught, what the claims covered, how the 2156 gyro and the steel gyros functioned, what results they accomplished and how they did so. Although Lear concedes that this evidence was extensive, it then proceeds to ignore it and asserts that this Court should now determine that *radial* motion alone accomplishes alignment in the steel gyros by looking at one assembly drawing which does not discuss the aligning motion, despite the uncontradicted

Although Lear says (p. 76) that the California Supreme Court used the specifications to expand the scope of claim 9, that court was only saying, when the entire paragraph upon which Lear relies is considered,[285] that the specifications do not limit claim 9 and that claim 9 does not expressly exclude any given configuration.

Lear also accuses the California Supreme Court (p. 70) of stating that the test for infringement is whether the steel gyros infringe the apparatus rather than the claims. Although the court so stated at page 194,[286] it also said at page 192[287] that it must determine whether or not the steel gyros "incorporate Adkins' invention as defined in the *claims* of the patent," and then in fact applied the *claims* to the steel gyros and concluded, at page 196,[288] that "the literal language of claim 9" covers the steel gyros, and at page 199[289] that the steel gyros come "within the *claims* of Adkins' patent." Thus, the single inadvertent use of the word "apparatus" is totally irrelevant, since that court in fact applied the claims to the steel gyros, as did the jury, which was properly instructed on this issue.[290]

Lear next accuses the California Supreme Court of reading the rejected method claims and the mandrel into the issued apparatus claims in determining that the claims cover the steel gyros. In so doing, Lear improperly connects that portion of the court's opinion

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[285] A-I, 196, Pet. App. 32-33.
[286] A-I, 194, Pet. App. 30.
[287] A-I, 192, Pet. App. 28.
[288] A-I, 196, Pet. App. 33.
[289] A-I, 199, Pet. App. 36.
[290] See fn. 90.

where it describes how the structure is achieved, with the court's application of claim 9 to the steel gyros. However, the court was very careful to point out that the mandrel "is used by Adkins only as an assembly tool,"[291] and that the mandrel is not one of the three elements of claim 9 of Adkins' patent.[292] Thus, the California Supreme Court's conclusion[293] that "the record does not support Lear [in that] claim 9 allows for bearing cups and receiving holes of any configuration permitting angular adjustment [and] the accused *apparatus* falls within the literal language of the *claim*, thus determining the issue of coverage," is manifestly correct. On this issue also, the jury was properly instructed that the mandrel is not part of Adkins' invention[294] and that the issued claims only and not the method claims must be considered.[295] Based on these instructions, the jury properly found that the claims cover the steel gyros.

Thus, neither the jury nor the California Supreme Court committed any error in applying claim 9 to the steel gyros and concluding that the steel gyros infringe claim 9.

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[291]A-I, 172, Pet. App. 9.
[292]A-I, 194, 196-197, Pet. App. 31, 33-34.
[293]A-I, 197, Pet. App. 33.
[294]R. T. 2849, 3143.
[295]R. T. 2840, 2849.

D. The Uncontradicted Testimony Demonstrated That Only Angular Tilt Accomplishes Coaxial and Parallel Alignment in the Steel Gyros.

All five witnesses who testified on this issue (Messrs. Lee,[296] Chesnut,[297] Ferrill,[298] Carpenter[299] and Adkins)[300] agreed that only angular tilt accomplishes alignment in the steel gyros. It is significant that on this point Lear's counsel conceded at the trial that the steel gyros permit angular tilt.[301] Although Mr. Ferrill demonstrated how *one* steel gyro bearing cup may be shifted radially in its receiving hole in *one* gimbal half,[302] neither he nor anyone else stated that this movement either achieved alignment or had any effect at all on alignment. The oversized hole in the gimbal frame in the steel gyros is obviously present, as all witnesses testified, not for any radial movement, as Lear alone now states, but so that the cylindrical cup can tilt in the cylindrical receiving hole, as obviously a cylinder will not tilt in a tight fitting cylinder,[303] just as a cone will not tilt in a tight fitting cone.[304]

Since every witness was in agreement that Adkins' patent teaches and claims angular tilt to accomplish alignment (which Lear concedes), and that angular tilt is used to accomplish alignment in the steel gyros,

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[296]A-I, 70, R. T. 2377-2378.
[297]A-I, 70, R. T. 2271-2272.
[298]A-I, 64, 1428.
[299]A-I, 64, R. T. 1212.
[300]A-I, 56, R. T. 347, A-I, 56, 358-359, A-I, 57, 370, A-I, 57, 375.
[301]R. T. 928.
[302]R. T. 1315-1316.
[303]R. T. 2377.
[304]R. T. 2358.

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9. AN APPARATUS FOR SUPPORTING BEARINGS IN ALIGNED RELATIONSHIP WHICH COMPRISES

a A PAIR OF BEARING-RECEIVING ELEMENTS EACH PROVIDING MEANS TO REMOVABLY SUPPORT A BEARING IN A FIXED RELATIONSHIP WITH SAID ELEMENT,

a' EACH OF SAID BEARING-RECEIVING ELEMENTS HAVING A MOUNTING SURFACE BY WHICH IT MAY BE SUPPORTED,

b MEANS FOR SUPPORTING SAID BEARING-RECEIVING ELEMENTS AT OPPOSED RELATIVELY SPACED POSITIONS,

b' SAID SUPPORTING MEANS PROVIDING SUPPORTING SURFACES GENERALLY CORRESPONDING TO SAID MOUNTING SURFACES AND PERMITTING SAID ELEMENTS TO BE INITIALLY ADJUSTABLY SHIFTED RELATIVE TO SAID SUPPORTING MEANS INTO ORIENTED POSITIONS WHERE SAID BEARING-SUPPORTING MEANS ARE IN ALIGNMENT WITH EACH OTHER,

c AND MEANS TO RETAIN SAID BEARING-RECEIVING ELEMENTS IN SAID ORIENTED POSITIONS TO PERMIT PAIRS OF BEARINGS TO BE INTERCHANGEABLY MOUNTED IN ALIGNED RELATIONSHIP SUPPORTED BY SAID BEARING SUPPORTING MEANS.

FIGURE III.

the trial court's statement in its opinion,[305] which Lear repeats in its brief, that the bearing cups in the steel gyros are "radially adjusted within the limits of the hole," is wholly lacking in evidentiary support and constitutes an unwarranted invasion of both the function of the expert witnesses and the jury as the sole finder of fact.

E. The Literal Language of Claim 9 of Adkins' Patent Covers All Four Steel Gyros as a Matter of Law.

Since there is nothing in the specifications which limits claim 9, there is no file wrapper estoppel, and since the aligning motion in Adkins' patent is angular tilt, which is used in the steel gyros to accomplish alignment, it is a simple matter to read claim 9 directly on the steel gyros. It is in fact uncontradicted in the record that the literal language of claim 9 reads directly on all four steel gyros. Chesnut, using Lear's Exhibit A-54[306] (reproduced opposite this page in Figure III), which broke claim 9 into three elements, found each element of claim 9 with each limitation of claim 9 in all four steel gyros *in the same cooperative relationship.*[307] In other words, Mr. Chesnut read claim 9 directly upon the bearing structure in all four steel gyros. Lee, in addition to reading claim 9 directly upon all four steel gyros,[308] gave his opinion as a patent expert that this claim fully and literally covered the steel gyro bearing structures.[309] The only witness produced by Lear on

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[305]A-I, 77, Pet. App. 96.
[306]Ex. A-54.
[307]R. T. 2260-2268.
[308]R. T. 2374-2379.
[309]R. T. 2379.

this subject was Ferrill, a patent attorney, who, by his own admission, was not an expert in gyro mechanics.[810] Ferrill, however, also found all three elements of claim 9 in the four steel gyros, and would have been forced to conclude that its literal language covered that bearing structure[811] but for the "contact," "ball in socket," "universal motion" and shape limitations which he alone manufactured from the specifications and read into the phrase "generally corresponds" in claim 9.[812] As has been seen, these "limitations" are both factually and legally erroneous.

Thus, the California Supreme Court correctly concluded, based on the evidence, that the literal language of claim 9 covers the steel gyros.

F. Even if Radial Adjustment Is a Desirable Feature Present Only in the Four Steel Gyros and Not in Adkins' Patent, It Does Not Prevent Coverage of the Steel Gyros by Adkins' Patent.

It is explained in detail, *supra,* that only tilting motion of the bearing cups with respect to the receiving holes achieves coaxial and parallel alignment in the steel gyros. It is also explained, *supra,* that the radial play which is present in the steel gyros is essential only to permit angular tilt, as two cylinders or any two surfaces of the same configuration will not permit angular tilt if they have the same dimensions. It is also demonstrated that the record is devoid of any testimony that radial motion has any function in achieving alignment or is of any advantage at all in the steel gyros.

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[810]R. T. 1388-1391.

[811]R. T. 1409-1411.

[812]R. T. 1430, 1432, 1434-1435, 1437-1439, 1441.

Nevertheless, even if radial play is present only in the steel gyros, because those gyros still have, by uncontradicted testimony, all of the elements of claim 9 in the same cooperative relationship, claim 9 would still cover those gyros.

It has long been the rule that even where the infringer has added such improvements to a patented device as to warrant the issuance of an improvement patent to him, he has not, by that addition, avoided infringement, *Temco Co. v. Apco Co.* (1928), 275 U.S. 320. This Court there said, at page 328: "It is well established that an improver cannot appropriate the basic patent of another, and that the improver without a license is an infringer and may be sued as such." In other words, radial movement in the receiving holes of all four steel gyros, whether it be considered an improvement or a defect or a happenstance, is irrelevant to the issue of coverage. The test to be applied is not whether there is an additional feature, but whether the steel gyros have all three elements of claim 9 in the cooperative relationship called for. On this point the evidence was uncontradicted.

G. Under the Uncontradicted Evidence, All Four Steel Gyros Are Covered by Adkins' Patent by the Doctrine of Equivalents.

The doctrine of equivalents provides that if an accused device contains all of the elements called for in the claim of a patent in the same cooperative relationship and performs substantially the same function in substantially the same way to obtain the same result, it is also covered by the claim even if the parts are different in name, form or shape, *Graver Tank & Mfg. Co. v. Linde Air Products Co.* (1950), 339 U.S. 605.

In the case at bar, both Messrs. Ferrill and Chesnut, the only witnesses on this point, testified that Adkins' patent covered the 2156 gyro.[313] As a result, Lear concedes in its brief that claim 9 covers the 2156 gyro (p. 69). Thus, if the four steel gyros are the mechanical equivalents of the 2156 gyro, they are also covered by Adkins' patent by the doctrine of equivalents, even if the cylindrical-cylindrical configuration is not covered by the literal language of claim 9. In this regard, Curriston, Lear's employee, stated[314] that the configuration of the bearing cup made no difference once it was cemented in. As Schoeppel, another Lear employee, put it,[315] the principle is identical for the 2156 gyro and the steel gyros, and the configurational differences in the bearing cups and the receiving holes do not make any difference at all in the way the gyros are assembled or in the resulting structure or in the resulting *accuracy*.[316]

The total insignificance of the shape of the parts is well emphasized by the following evidence. Ferrill testified that the receiving holes in the gimble halves of the steel gyros are not always precisely cylindrical, but because of the hydroforming process might approach the conical.[317] Lear's admissions in answer to requests for admissions Nos. 25, 34 and 35, read into evidence, admitted that the three different configurations of bearing cups employed in the 2156 gyro did not prevent those bearing cups and their receiving holes from being

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[313]R. T. 1453-1455, 682-684, 2254-2260.
[314]A-I, 65, R. T. 1783.
[315]A-I, 66-69, R. T. 2173-2177.
[316]R. T. 2172.
[317]R. T. 1418-1419.

"substantial equivalents functionally."[318] Carpenter, another Lear witness, testified that one bearing cup in the 2156 gyro was cylindrical with a "radiused edge" which mounted to a conical receiving hole.[319] Thus, the difference between the 2156 gyro, which uses a cylindrical bearing cup in a conical receiving hole, and the steel gyro, which also uses a cylindrical cup in an inaccurately formed cylindrical hole which may approach the conical, is obviously semantic rather than actual.

It is no accident that no witness produced by Lear explained why all three 2156 configurations are equivalents of each other and not also of the steel gyro configurations, when all testimony showed that the 2156 gyro and all four steel gyros were in fact exact equivalents functionally. In this regard, Adkins stated for all five gyros[320] that "in my opinion they are all . . . equivalents . . . they are entire equivalents."

The history of Lear's use of Adkins' invention further disproves any material distinction based on configuration alone. Adkins began experimenting with self-aligning spherical cups in spherical receiving holes in January of 1952,[321] and turned in mid-1952 to cementing spherical bearing cups into conical receiving holes.[322] The Grand Rapids division, under Schoeppel's direction, began experimenting in September of 1952 with self-aligning cylindrical flanged cups in oversized

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[318]R. T. 660-661.

[319]R. T. 641.

[320]R. T. 1708.

[321]R. T. 2456.

[322]Ex. 72 (see fn. 41).

cylindrical holes in the gimbal,[323] and also turned to cementing in these bearing cups in October of 1953.[324] As Mr. Schoeppel stated:[325] "[Lear] went to the cemented-in construction in as simple a fashion as possible." Thus, the configurational differences in the 2156 gyro and the four steel gyros arose from purely accidental historical reasons, rather than as the result of any intended functional difference.

Stated differently, Lear failed to produce one witness or one cogent piece of testimony that the steel gyros are anything but the exact equivalent of the 2156 gyro. Little wonder that the California Supreme Court stated[326] that "the doctrine of equivalents would require that we conclude that Lear utilized Adkins' invention. Here the steel gyros contain the same elements, although perhaps different in size, form and shape, as in the Adkins patent, and they accomplish substantially the same function in substantially the same way."

It therefore remains only to show that the California Supreme Court was also correct in holding, again on uncontradicted evidence, that Lear is not building the steel gyros according to the prior art.

H. Lear Is Not Building the Steel Gyros According to the Teachings of the Prior Art Patents.

Since Lear has combined the question of validity with the question of infringement, it is difficult to tell whether it is claiming that it is building the steel gyros

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[323]Ex. L, R. T. 909.
[324]R. T. 1773.
[325]R. T. 2154.
[326]A-I, 199, Pet. App. 35.

according to the teachings of Schwan or according to the teachings of other prior art patents as well. Consequently, after stating the correct rules of law, we will consider Schwan first and then the remaining four prior art patents.

Under *Scott Paper Co. v. Marcalus Mfg Co.* (1945), 326 U.S. 249, a licensee may use the prior art only to identify the novel feature in a combination patent. Then, if the licensee is using the prior art combination only, he is not liable, as the licensor's patent cannot cover his device. In attempting to so use the prior art, one prior art patent cannot be combined with another prior art patent unless there is a suggestion in a particular prior art patent that it may be combined with another prior art patent or that combining prior art patents would occur to one skilled in the art, *United States v. Adams* (1966), 383 U.S. 39. In the case at bar there is no suggestion in any prior art patent that it can be combined with another prior art patent to produce Adkins' patented device. There was also no testimony at the trial from any witness that any prior art patent contained a suggestion that it could be combined with another prior art patent. Moreover, there was no testimony from any witness that the combination of any prior art patent with any other prior art patent would have been obvious to one skilled in the gyroscope art. As the court noted in *Landis Mach. Co. v. Parker-Kalon Corp.* (1951, Cir. 2), 190 F. 2d 543, whether it would occur to one skilled in the art to combine two or more prior art references cannot be decided *"in abstractu."* In addition, the licensee must show that his device has all of the elements of the prior art patent in the same cooperative relationship where

they achieve the same result in the same way. As the prior art patents have been fully considered in Point III, they will only be summarized herein and then compared to the steel gyros.

SCHWAN:

In Schwan the end bells are machined for parallelism. Oversized holes are provided for sliding the bearing cups radially across the surface of the end bells to properly space the air gap between the rotor and the stator. Each bearing cup is adjusted independently of the other. Then, when the air gap is thereby properly spaced, the bearing cups are screwed tightly to the frame. Thus, the bearing cups may or may not be coaxial. Moreover, since the bearing cups are screwed to the frame, the parallelism of the bearing cups is entirely dependent on the parallelism of the end bells. Thus, Schwan cannot achieve parallelism of the bearing cups irrespective of the parallelism of the end bells, and may or may not, and probably does not, achieve coaxial alignment of the bearing cups. In addition, in Schwan there is no permissive cooperation between the bearing cup and the receiving hole because the screws force the bearing cup against the frame.

It has already been seen that the steel gyros do not accomplish alignment by any radial motion. The gimbal halves are not machined for parallelism. The oversized holes are provided in the gimbal halves solely to permit the bearing cups, which are prealigned in precise coaxial and parallel alignment, to tilt so that when cemented in the alignment initially achieved is maintained, irrespective of the lack of parallelism of the gimbal halves and irrespective of the coaxial alignment

of the receiving holes, because of the permissive relationship between the bearing cups and the receiving holes.

As this Court held in *Diamond Rubber Co. v. Consol. Tire Co.* (1911), 220 U.S. 428, Lear's argument that it is using the Schwan device in the steel gyros is fully answered merely by showing that Lear is not machining its gimbals for parallelism and is not using screws and clamping the bearing cups to the frame, but, to the contrary, is using the precise advances of Adkins' patent by tilting the bearing cups and cementing them to the receiving holes in gimbals which are not machined for parallelism. Thus, Lear is building the steel gyros according to the teachings of Adkins' patent, and the structure is covered by the claims of Adkins' patent and not by Schwan.

SPERRY:

Sperry does not have a bearing cup. Rather, the bearings, which are placed around the opposite ends of the shaft, are loosely contained in the frame so that when the shaft rotates the bearings move with respect to the frame and self-align. Each bearing, of course, moves differently with respect to the frame when the shaft rotates. Sperry also does not have cement or any other means which affixes the bearings to the frame.

In short, two elements employed in the steel gyros are missing (the bearing cup and the retaining means), and alignment is accomplished in a different way by a different principle. Thus, Lear is not building the steel gyros according to Sperry, but, rather, according to the teachings of Adkins' patent, and the resultant

structure is covered not by Sperry but by the claims of Adkins' patent.

GRENAT:

Grenat does not have bearing cups. The bearings are placed on the shaft, which is not machined for either coaxial or parallel accuracy, and are then soldered into the frame. The bearings thus cannot be removed and replaced without repeating the entire alignment procedure. As one of Lear's witnesses stated, the removability of the bearings without having to realign all of the parts is the key to gyro design. Since Lear, in building the steel gyros, is using bearing cups which are prealigned to be parallel and coaxial and are cemented in to permit the bearings to be removed without realigning all of the parts, Lear is building those gyros according to the teachings of Adkins' patent, and the structure is covered not by Grenat but by the claims of Adkins' patent.

MOODY:

In Moody the bearing cups are pressed into the receiving holes in the frame. There is no retaining means such as cement, solder, etc. The bearing cups are held by the press fit, which is a required cooperation between two elements and not a permissive cooperation between three elements. After being pressed in, each bearing cup is aligned separately by hitting it with a hammer and rotating the shaft to feel for bearing bind. Thus, although the cups are tilted by this crude operation, they are, firstly, tilted separately and, secondly, not prealigned in precise coaxial and parallel alignment and then maintained in that position. In fact, precise parallel and coaxial alignment is a vir-

tual impossibility. Thus, the number of parts is different, the cooperation is different and the aligning principle is different. In the steel gyros the bearing cups are prealigned in precise coaxial and parallel relationship, permissively aligned with respect to the receiving holes, and permanently secured to the receiving holes by cement. This is what Adkins' patent teaches and what claim 9 covers, and thus the steel gyros are covered by claim 9 of Adkins' patent and not by Moody.

HERR:

Herr does not have bearing cups. The shaft is conically pointed at both ends and rides in concave bearings which have convex outer surfaces which, in turn, ride in the frame ends. The bearings are not fixed to the frame but are free to self-align by rotation of the shaft. Thus, Herr has neither bearing cups nor, for that matter, anything which is affixed. The principle of Herr is the same as Sperry, and for the reasons stated with respect to Sperry, Lear is building the steel gyros not according to the teachings of Herr, which do not cover the steel gyros, but according to the teachings of Adkins' patent, claim 9 of which does cover the steel gyros.

Thus, no prior art patent has all three elements of Adkins' patent in the same cooperative relationship, and the *entire combination, i.e.,* the three elements with their permissive cooperation, is the novel feature which Lear is using in the steel gyros. Therefore, the rule of the *Scott Paper* case, *supra,* is inapplicable and the steel gyros infringe Adkins' patent.

VII.

IF, ARGUENDO, THE LICENSE AGREEMENT IS UNENFORCEABLE BY REASON OF ILLEGALITY, OR A FAILURE OF CONSIDERATION OCCURS, THE CASE MUST BE REMANDED FOR A TRIAL ON THE ALTERNATIVE SECOND CAUSE OF ACTION.

If the patent is invalid, and if this constitutes a total failure of consideration excusing Lear's further performance, or if the agreement is unenforceable for illegality, a trial on the alternative second cause of action is required. The alternative second cause of action stated causes of action for misappropriation in breach of confidence, breach of implied-in-fact contract, and unjust enrichment in the event the agreement of September 15, 1955 failed for any reason. The dismissal of this cause of action was affirmed by the California Supreme Court for the reason that Adkins recovered under the agreement pursuant to the first cause of action, and the alternative second cause of action therefore became moot.[327]

Under State law, if an express agreement fails for any reason after the plaintiff has fully performed his part of the bargain and the defendant cannot be held to his part of the bargain, an implied contract arises to prevent unjust enrichment, and the plaintiff may recover the reasonable value of the benefit he has conferred on the defendant either in unjust enrichment, Restatement of Restitution, §§1 and 40, *Estrin v. Superior Court* (1939), 14 Cal. 2d 670, *Zellner v. Wassman* (1920), 184 Cal. 80, *Lazzarevich v. Lazzarevich* (1948), 88 Cal. App. 2d 708, 720, *Philpott v. Superior*

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[327]A-I, 212, Pet. App. 48-49.

Court (1934), 1 Cal. 2d 512, *Mahony v. Standard Gas Engine Co.* (1921), 187 Cal. 399, *Richter v. Union Land etc. Co.* (1900), 129 Cal. 667, or for misappropriation in breach of confidence, Restatement of Torts, §757, *Hollywood M. P. Equipment Co. v. Furer* (1940), 16 Cal. 2d 184, *Thompson v. California Brewing Co.* (1957), 150 Cal. App. 2d 469, *Hyde Corporation v. Huffines* (1958), 314 S.W. 2d 763, or upon an implied-in-fact contract, *Desny v. Wilder* (1956), 46 Cal. 2d 715, *Sutton v. Walt Disney Productions* (1953), 118 Cal. App. 2d 598, *Chandler v. Roach* (1957), 156 Cal. App. 2d 435.

Although Lear argued in the California courts that all of these causes of action were abolished by this Court's holding in *Sears, Roebuck & Co. v. Stiffel Co.* (1964), 376 U.S. 225, and *Compco Corp. v. Day-Brite Lighting, Inc.* (1964), 376 U.S. 234, *Sears* and *Compco* cannot be so extended. Both *Sears* and *Compco* held only that Federal law has preempted the field once a patent application is filed, and that after invalidation of a United States patent, State law cannot grant a property right in the patented device and protect it from copying by third parties with whom the plaintiff had no dealings on a "passing off" unfair competition theory. The State theory of passing off struck down by both of those cases was based upon a property right afforded to the patentee by State law. Neither of those cases involved either a patent license agreement which fails or theories of unjust enrichment, the submission of an idea in confidence or the submission of an idea under facts creating an implied-in-fact contract which are based on a consensual relationship and not a property right. The decisions following *Sears* and

Compco make it clear that this Court did not intend to eliminate any State theory based on a consensual or contractual relationship.

In *Servo Corporation of America v. General Electric Co.* (1964, Cir. 4), 337 F. 2d 716, the Servo corporation sued General Electric for infringement of three patents and also for misappropriation in breach of confidence. In that case the Southern Railroad, which had permitted the Servo Corporation to conduct experimental work on its railroad equipment, had also invited General Electric to see this work in order to develop a competitive source of supply. The trial court invalidated the patents and refused to grant relief for misappropriation. In reversing the judgment, the Fourth Circuit also held the patents invalid but found that General Electric was *in pari delicto* with the Southern Railroad, and that therefore General Electric had learned of Servo Corporation's experimentation in a situation of confidence. The court then applied the theory of *Booth v. Stutz Motor Car Co.* (1932, Cir. 7), 56 F. 2d 962, and Section 757 of the Restatement of Torts and imposed liability for the period after issuance of the patents on the ground that General Electric had misappropriated Servo Corporation's trade secret in breach of confidence. In so holding, the court distinguished *Sears* and *Compco,* stating that those cases applied only to an unfair competition passing off situation and not to a situation where a defendant learns of an idea in a situation of confidence. The court said, at page 724:

> "Because of the confidential relationship which was betrayed here by Southern, this case is distinguishable from *Sears, Roebuck & Co. v. Stiffel Co.* (cita-

tion omitted). In that case the action was grounded upon . . . a remedy for copying resulting in confusion. . . . The court went on to hold that an unpatented article being in the public domain may be freely copied as the federal patent law had preempted the field from state action. This case, however, is one of unjust enrichment through breach of a confidential relationship. . . ."

The scope of *Sears* and *Compco* was also considered in *Winston Research Corp. v. Minnesota Mining & Mfg. Co.* (1965, Cir. 9), 350 F. 2d 134. In that case, the Ninth Circuit affirmed an injunction in favor of Minnesota Mining against a group of its former employees who had formed Winston Research Corp. and had used know-how gained as employees of Minnesota Mining in manufacturing a competing tape recorder. Although the court stated that *Sears* may preclude protection for industrial information developed by an employee in the performance of his duties, as distinguished from information disclosed to the employee by his employer, the court expressly held in the text and in footnote 2 on pages 424 and 425 that *Sears* and *Compco* did not abolish the State cause of action for misappropriation in breach of confidence. The court there said that the State cause of action for misappropriation in breach of confidence remained, since " 'The protection is merely against breach of faith and reprehensible means of learning another's secret.' "

Lastly, in *Components for Research, Inc. v. Isolation Products, Inc.* (1966), 241 Cal. App. 2d 726, the court held that *Sears* and *Compco* are not to be extended to abolish State causes of action based on an implied consensual relationship between the parties. In that case

plaintiff sued for damages and an injunction to prevent the defendants from using several of plaintiff's trade secrets concerning a manufacturing process which defendants had misappropriated in breach of confidence. A patent was issued on one of the trade secrets misappropriated by defendants but not on the others. The defendants argued that under *Sears* and *Compco*, State common law causes of action could not prohibit their using the plaintiff's manufacturing procedures even if misappropriated in breach of confidence. In rejecting this argument, the court said, at page 730:

> "As to products which are unpatented, defendants contend that state courts cannot invade the patent field by proscribing mere copying (*Sears, Roebuck & Co. v. Stiffel Co.*, 376 U.S. 225. . .; *Compco Corp. v. Day-Brite Lighting, Inc.*, 376 U.S. 234. . .) But these cases are readily distinguished from that at bench. The judgment here but affords protection against the use of plaintiff's trade secrets by those to whom they have been disclosed in confidence. Whether the idea was patented or not, plaintiff is entitled to such protection (*Saco-Lowell Shops v. Reynolds*, 141 F. 2d 587, 598), and *Sears* and *Compco* do not modify this rule (*Servo Corporation of America v. General Electric Co.*, 337 F. 2d 716, 724-725)."

It is thus clear that all authorities which have to date considered the question of the scope of *Sears* and *Compco* have distinguished between the passing off theory of unfair competition, which works on a property right in the plaintiff, and the consensual theories of misappropriation in breach of confidence, breach of im-

plied-in-fact contract and unjust enrichment, all of which afford protection to an idea not as property but as the subject of an express or implied agreement.

Thus, in *Thompson v. California Brewing Co.* (1957), 150 Cal. App. 2d 469, the court held that although there was no property interest in an abstract idea, the plaintiff could protect that idea against misappropriation by the defendant by using the misappropriation in breach of confidence theory, and expressly approved the Restatement of Torts, §757. Similarly, in *Desny v. Wilder* (1956), 46 Cal. 2d 715, the court held that although "California does not now accord individual property-type protection to abstract ideas," and "even though an idea is not property" (pp. 732-733), ideas may be consideration for a contract and may be the subject matter of a valid and enforceable implied-in-fact contract.

It is therefore clear that the misappropriation in breach of confidence, breach of implied-in-fact contract and unjust enrichment theories of the second cause of action are not affected by either the *Sears* or the *Compco* decisions because they do not afford "property" protection to ideas but protect them on the basis of a consensual arrangement between the parties.

Conclusion.

It is submitted that the writ of certiorari should be dismissed as improvidently granted, since no substantial Federal question was either preserved in the lower courts or timely presented to this Court in accordance with long-standing procedural rules regarding raising and preserving Federal questions. However, if this Court feels that the importance of any question pre-

sented requires an exception to these rules, then this Court should conclude that there is no patent misuse involved in this case and that the doctrine of licensee estoppel *per se* does not conflict with the anti-trust laws but is essential to uphold the sanctity of contracts freely and fairly entered into and on which inventors have relied, and is vital to effectuate the purpose of the patent clause and the policy of the patent laws. If, however, the doctrine of licensee estoppel is now to be judicially overturned, this Court should hold that the licensee is liable for accrued royalties to the date of final judgment of patent invalidity, and then remand this case to the California Supreme Court for a determination of the issue of validity.

Finally, in the event the license agreement is for any reason unenforceable, either in its entirety or for any period of time, this Court should remand this case to the California courts for a trial on the alternative second cause of action which was dismissed as moot when Adkins recovered judgment on the first and primary cause of action.

Respectfully submitted,

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September 24, 1968.

LIBRARY
SUPREME COURT, U.S.

IN THE

Supreme Court of the United States

October Term, 1968

No. 56

LEAR, INCORPORATED,

Petitioner,

v.

JOHN S. ADKINS,

Respondent.

On Writ of Certiorari to the
Supreme Court of California.

REPLY BRIEF FOR PETITIONER.

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IN THE

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October Term, 1968
No. 56

LEAR, INCORPORATED,

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vs.

JOHN S. ADKINS,

Respondent.

On Writ of Certiorari to the Supreme Court of California.

REPLY BRIEF FOR PETITIONER.

Introductory Statement.

Adkins' lengthy brief, instead of bringing into focus the basic issues involved, has been directed toward a confusion of such issues. Such confusion has been created by the making of numerous unwarranted critical assumptions of fact which are completely at variance with the record, and, in large measure on the basis of these assumptions, by distorting the nature of the legal issues before the Court. This confusion has been augmented by a fourteen-question purported "restatement" of the four fundamental questions presented and argued in Lear's brief.

As an aid to the Court, we have annexed, in tabular form, as Annex I, to which reference will from time to time be made, a comparison of the Questions Pre-

sented as stated by Lear and as restated by Adkins. As will become evident in this reply brief, a number of such questions misstate the issues presented by Lear's questions or are not even relevant to the issues in this case.

Adkins has sought to confuse the questions before the Court (a) by distorting the relationship between the parties and misstating the basic nature of their agreement, (b) by glossing over the fundamental issue of patent misuse raised by the lower court's interpretation of the license agreement and basing his argument on common law rights and not on patent rights, (c) by attempting to change the issues presented in Lear's challenge of the doctrine of licensee estoppel from issues based upon patent rights governed by federal law to issues based upon the common law governed by state law, and (d) by misstating essential facts which critically affect the issues of patentability, validity and infringement.

In this reply brief we shall first seek to clarify these matters. We shall then comment upon Adkins' effort to have this Court reconsider whether substantial federal questions were properly raised below. We shall also discuss two new issues raised by Adkins, one of which seeks to support a future cut-off date for the payment of royalties to Adkins even if further judicial consideration of the validity of Adkins' patent confirms the holding as to its invalidity, as a matter of law, which has already been made by the California Superior Court, and the other of which seeks to resurrect the second cause of action based upon common law rights.

Point II of Adkins' brief urges the Court to hold that, contrary to Lear's Point I, the California Supreme

Court's implied restrictions on Lear's right to terminate the license agreement results in no misuse of patent rights and that accordingly the agreement is not unenforceable.

Point III of Adkins' brief urges the Court to hold that, contrary to Lear's Point II, the doctrine of licensee estoppel does not conflict with the patent laws or antitrust laws, but is essential as a matter of public policy and under the patent laws.

In each instance, Adkins' argument distorts the relationship of the parties and misstates the nature of the license agreement in a manner which demonstrates a lack of concern for the record and for the specific issues which were before the courts below.

Contrary to the image created by Adkins' brief,[1] there is nothing in the record to support Adkins' allegation that his employment was at a "nominal salary . . ." below that normally paid to employees holding similar positions[2], or that it was Adkins' disclosure of his invention to Lear's Grand Rapids Division which prompted the development of the Michigan steel gyros;[3] or that the California Model 2156 gyro, which was developed by Adkins, was a significant advance in gyro design[4] or that the 1955 license agreement, on which

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[1]R.Br. 8, 9 and 13.

[2]The trial court refused to permit the introduction of any evidence concerning the employment status of Adkins on the ground that it was irrelevant and immaterial to the cause of action based on the license agreement (R.T. 212, line 24; R.T. 215, line 21). To support his contention that he was paid only a nominal salary, Adkins cites (Dep. 194). Apparently this refers to a deposition which never became part of the record before the California courts and which is not part of the record before this Court.

[3]R.Br. 13.

[4]R.Br. 12, 13.

is based the cause of action which was before the California Supreme Court, was "envisioned" by Lear as a means of "avoiding its far broader obligation" under the 1951 letter agreement.[5]

On the contrary, as shown by the record, Adkins was a full-time employee[6] of Lear from 1952 to 1958 and worked with several other Lear employees in designing and developing the California Model 2156 gyro;[7] the bearing mounts for the California Model 2156 gyro had to be redesigned by others before it could be placed in production;[8] the Michigan steel gyros, as found by the trial court and admitted by Adkins, were developed independently of Adkins who had nothing to do with the design and development of the elements or the configuration of the elements that make up the apparatus for supporting bearings in the Michigan steel gyros;[9] the California Model 2156 gyro, which was developed by Adkins and other Lear employees, was an insignificant advance in gyro design which attracted relatively minor sales for sophisticated military equipment;[10] and other companies produced competitive gyros.[11]

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[5]R.Br. 15.

[6]A-I. 6, 40.

[7]R.T. 309-312, 1084, 1694, 1698, 2430, 2431, 2437, 2456 & 2465.

[8]R.T. 1097-1100, 2332-2341.

[9]The trial judge expressly held that the Michigan steel gyros were devloped independently (A-I. 75); Adkins himself stated that he had nothing to do with their development (R.T. 550-552; 1710-1711; 2085-2088); and Lear's project engineer in Michigan stated that he developed the Michigan steel gyros independently of Adkins using "old art" which had been known for many years (A-II. 117, Ex. Y, R.T. 1789).

[10]Sales of the California Model 2156 gyro amounted to less than 2% of Lear's gyro sales (A-I. 73).

[11]R.T. 1774.

Furthermore, the license agreement, which is depicted by Adkins as the result of overreaching on the part of Lear, was in fact the result of three years of negotiation in which, as held by the California Supreme Court, both parties were represented by counsel (A-I.174). Adkins' statement to the contrary[12] is pure fiction.

Fundamental also in the arguments urged by Adkins in support of the enforceability of the license agreement, despite Lear's restricted right of termination, and in Adkins' support of the doctrine of licensee estoppel, is his reliance on the letter agreement of December 29, 1951 (A-II.161). Thus, his brief states that this letter agreement is of "extreme importance to the issue of licensee estoppel",[13] but Adkins' brief mentions only by footnote that the agreement was not admitted in evidence.[14] The trial court specifically ruled that the letter agreement was inadmissible as irrelevant and immaterial, and the court excluded testimony with respect to the letter agreement.[15] That agreement was obviously so indefinite as to be unenforceable. Some indication of the significance of the 1951 agreement is evidenced by the fact that it was mentioned only in passing by the California Supreme Court (A-I.170).

Additionally, implicit in much of Adkins' argument and explicit in his "restated" questions 3 and 6 is a distortion of the nature of the 1955 license agreement as a royalty agreement founded upon the disclosure of a "secret idea, discovery and invention."[16] On this er-

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[12]R.Br. 15.
[13]R.Br. 5.
[14]R.Br. 8.
[15]R.T. 295, 2455.
[16]R.Br. 29, 38, 44, 49, 56, 78, 84.

roneous premise, Adkins argues that the enforceability of the license agreement is purely a matter of state law based upon alleged common law rights. He therefore concludes that, even as construed by the California Supreme Court, the agreement involes no questions as to patent misuse (Point II-B), and that, regardless of the significance of federal patent policy, Lear "by its bargain" was estopped to challenge the patentability of the claims of the application (Point III-E).

The record shows that secrecy could not have existed because the gyros were never classed as secret, the California Model 2156 gyros were developed by Adkins while working as an employee of Lear along with other employees of Lear,[17] and both the California Model 2156 gyros for the MA-1 compass and the Michigan steel gyros were already being manufactured and sold when the license agreement was consummated in 1955.[18]

Moreover, common law rights in a "secret idea, discovery and invention" and patent rights are mutually exclusive. Such common law rights depend upon secrecy, whereas patents are based upon disclosure of the invention to the public.

The concept of the nature of the license agreement which Adkins argues before this Court finds no support even in the opinion of the California Supreme Court, for, as that court recognized (A-I.181-182), although the license granted under Section 2(a) of the agreement was a license to manufacture products covered by or containing Adkins' "inventions," such "inventions" were specifically defined, in Section 1(d) of

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[17]R.T. 309-312, 1084, 1694, 1698, 2430, 2431, 2437, 2456, 2465.

[18]A-II:16, Ex. 8 §17, R.T. 296; Ex. 35, R.T. 503.

the agreement, as "all claims and inventions disclosed or intended to be disclosed in said Exhibit B [Adkins' patent application], . . . *but only to the extent that such claims or inventions mentioned in said Exhibits are patented or patentable by Adkins.*"[19] (Emphasis supplied.) The patentability of the claims of Adkins' application was at the heart of the license agreement. Such an agreement is clearly not an agreement as to which the only relevant considerations are those of state law.

Finally, in Points V and VI of Adkins' brief, on the issues of validity and infringement, which may be considered as matters of law under the circumstances of this case, Adkins attempts to make simple issues difficult, and attempts to make them appear as questions of fact. Adkins further attempts to mislead this Court by stating, in many places in his brief with respect to the testimony and evidence, that they are uncontradicted in support of his position. For example, on the basic issue under the license agreement as to whether Lear's products use a patentable or patented invention of Adkins, Adkins asserts that the evidence is uncontradicted in support of his position that angular tilt accomplishes alignment in Lear's Michigan steel gyros.[20] This is a gross misstatement, as the evidence is uncontradicted that angular tilt does not accomplish alignment in Lear's Michigan steel gyros. In fact, Adkins himself put a document in evidence which shows the falsity of his assertion before this Court. His Exhibit 59 (R.T. 1865) states:

> ". . . (T)he Grand Rapids method (used in the Michigan steel gyros) does not require any rocking action (angular tilt) for alignment".

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[19]A-II.3, Ex. 8, R.T. 296.

[20]R.Br. 128.

Furthermore, Adkins himself testified that the alignment in the Michigan steel gyros is accomplished by the placing of the bearing cups on the mandrel[21] so that obviously angular tilt has nothing to do with accomplishing alignment in the Michigan steel gyros.

The above represents only one of the many misleading statements by Adkins as to what the record shows. Every assertion by Adkins as to what the record shows must be scrutinized for credibility.

I.

ADKINS PRESENTS NO GROUNDS FOR DISMISSAL OF THE WRIT.

In question No. 1 of his "restated" questions Adkins seeks to have this Court consider *de novo* whether the Questions Presented were raised below, so as to give this Court jurisdiction under 28 U.S.C. §1257(3). Adkins' related argument in Point I is based upon his "restated" questions, rather than on the Questions Presented, as originally stated by Lear, which were the basis for its Petitition.

As shown in Annex I, Adkins' questions 3 and 6 are unrelated to the issues involved here.[22] These two questions are concerned with purported common law rights in the invention, rather than upon rights in the invention to the extent that it is patentable, as required by the circumstances of this case and as set forth in Lear's questions. Furthermore, Adkins' questions 8 and 14 relate to subsidiary issues, specifically raised for the first

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[21]R.T. 2489, 2491, 2493.

[22]Adkins restated question 6 on page 3 is mistakenly identified as question 7 by Adkins in his argument of Point I on page 41. Similarly, Adkins restated questions 5 and 7 on pages 2 and 3 are mistakenly identified as questions 6 and 8 on pages 40 and 41.

time by Adkins. Argument addressed by Adkins to whether these four questions were raised below is irrelevant because Lear did not include them in the Questions Presented in its Petition.

Adkins recognizes that his questions Nos. 9, 10 and 11 were timely raised as federal questions in the California courts. However, he now asserts for the first time that they are not substantial federal questions. This will be considered in sub-section D below with reference to Lear's questions 4(a) and 4(b).

With reference to his questions 12 and 13, Adkins does not argue that they were not timely raised below, but rather he asserts that they are not within the Questions Presented. This will be considered in subsections C and D below with reference to Lear's questions 3 and 4(b).

Adkins' questions 2, 4, 5, and 7, as shown on Annex I are similar to Lear's questions and are related to the issues here involved. The argument in Point I of Adkins' brief which seeks to show that these "restated" questions were not raised below merely present in another form the arguments urged by Adkins in opposition to Lear's Petition, and will be considered in subsections A and B below.

Adkins fails to recognize that a party may not seek dismissal of certiorari previously granted by merely repeating arguments previously made in opposition to a grant of the writ, but must present considerations not apprehended at the time of such grant. To quote Mr. Justice Stewart, concurring, in *Sentilles v. Inter-Caribbean Shipping Corporation* (1959), 361 U.S. 107, 111:

> "Yet under our rule, when four members of the Court vote to grant a petition for certiorari, the

> case is taken. If this rule is not to be frustrated, I can, as presently advised, see no escape from the duty of considering a case brought here on the merits, unless considerations appear which were not apprehended at the time certiorari was granted."

(See also, *Rice v. Sioux City Cemetery* (1954), 349 U.S. 70, 78, and *Needelman v. United States* (1960), 362 U.S. 600.)

Some instances in which, after entertaining argument on the merits, the Court has found that matters which were not apprehended at the time certiorari was granted call for dismissal of the writ, are given in Stern & Gressman, *Supreme Court Practice*, 190 §5-16, 3rd Edition, 1962. To the extent that Adkins at this time merely repeats arguments unsuccessfully advanced in his brief in opposition to Lear's Petition, he provides no basis for such a finding in this case. However, we shall respond briefly below to Adkins' assertions as to Lear's alleged failure to raise below the four basic questions presented in Lear's Opening Brief.

A. The Restrictive Termination Condition in the License Agreement Is a Patent Misuse (Question One of Lear's Opening Brief and Question Three of the Petition).

Adkins' attempt to show Lear's failure to raise this issue in a timely manner is directed toward its alleged failure to raise Adkins' question 2 and appears under Part I of his Brief at pages 37-38. His Brief merely repeats the arguments unsuccessfully advanced under Item 2 (pp. 6-7) and Item 5 (p. 9) of Adkins' Brief in Opposition to the Petition, and ignores the material

submitted to the Court by Lear in support of the timely raising of Question Three of the Petition, which appears at pages 18-19 of the Petition itself. Therefor, this repeated argument need not be considered.

B. The Impropriety, Under the Federal Patent and Antitrust Laws, of the Doctrine of Licensee Estoppel (Questions Two and Two (a), (b) and (c) of Lear's Opening Brief and Questions One, Two and Three of the Petition).

Adkins' attempt to show Lear's failure to raise in a timely manner the issues involved in these questions is directed in part toward Lear's alleged failure to raise below Adkins' question 4, and appears under Part I of his Brief, at pages 39-40. Such attempt is also directed toward Lear's alleged failure to raise below Adkins' question 7, and appears under Part I of his Brief, at page 41 (where Adkins' Question 7 is erroneously identified as his question 8). Adkins' argument at these pages substantially repeats his argument appearing under Item 1 (p. 6) and Item 4 (p. 8) of his Brief in Opposition to the Petition, and ignores the material submitted to the Court by Lear in support of the timely raising of these questions, which appears at pages 10-17 of the Petition itself.

Adkins designated certain small portions of the record for printing in Appendix I, on the basis of which he now attempts to show that Lear failed to raise a federal question below concerning estoppel to contest validity. For example, Adkins designated the portion of Lear's "Opening Brief . . . With Respect to the 2156 Gyroscope" in the California courts that relates to termination of the license agreement (A-I.86-111), and he

seeks to show failure to raise a federal question by reference to Lear's argument on the issue of termination of the license agreement in accordance with its terms. However, when taken in context with the preceding portions of that brief (see pp. 19-38 which immediately precede pp. 39-64 designated by Adkins), it is apparent that termination of the agreement was only one of several grounds urged by Lear as giving it the right to contest the validity of Adkins' patent, and that Lear's Point I in that brief contested validity without tying it to the issue of termination, on the broad ground that "Plaintiff's Patent Fails to Meet the Constitutional Standard Required for Patentability."

C. The Establishment by the Record as a Matter of Law of the Unpatentability of the Claims of the Application and of the Invalidity of the Patent (Question Three of Lear's Opening Brief, Subsidiary to Questions Two and Two (a), (b) and (c) of the Brief and Questions, One, Two and Four of the Petition.)

As shown by Annex I, the counterpart of Lear's question 3, which raises the issue stated above, is Adkins' question 12. That question is objectionable in that it assumes that a determination by this Court of unpatentability and invalidity requires reconsideration by this Court of every factual and legal issue in the record relating to those matters. As pointed out in Section IV below and also at pages 49 to 60 of Lear's Opening Brief, no broad reexamination of all factual material in the record is required where, as here, prior art patents alone, establish invalidity as a matter of law. *Graham v. John Deere Co.* (1966) 383 U.S. 1.

Regardless of the unwarranted assumption inherent in his "restated" Question 12, Adkins, of course, does not urge that Lear failed to raise below in a timely manner the federal issues presented by its Question 3, namely, the unpatentability of Adkins' claims and the validity of his patent. His challenge of the Court's consideration of questions of patentability and patent validity is based on a mistaken reliance on Rule 23-1(c). As appears from pages 42-43 of Part I of his Brief, and pages 87-88 of Part V thereof, Adkins argues, erroneously we submit, that the issues of patentability and validity presented by Question 3 of our opening brief are not, in conformity with the requirement of Rule 23-1(c), "fairly comprised" in Questions One, Two and Four of the Petition. Those questions raised various aspects of the basic issue whether the California Supreme Court was in error, by its application of the doctrine of licensee estoppel, in its refusal to review the determination of unpatentability and invalidity made on a full record by the California Superior Court, and were restated as Questions Two and Two(a), (b) and (c) of Lear's opening brief. Certainly, where the application by a state's highest court of the doctrine of licensee estoppel has resulted in a refusal to review the trial court's determination of patentability and patent validity, such patentability and validity are considerations fairly comprised within and are subsidiary to a challenge by Lear of the state court's erroneous application of that doctrine.

D. The Ignoring by the Court Below of Basic Criteria of Federal Patent Law in Enforcing a Patent Under a License Agreement (Questions Four (a) and (b) of Lear's Opening Brief and Question Five of the Petition).

As shown by Annex I, the counterparts of Lear's questions 4(a) and (b), which are addressed to the issues stated above, are Adkins' "restated" questions 9, 10, 11 and 13, provided the misstatements concerning the issues are disregarded.

Adkins recognizes that the court below gave lip-service to criteria of federal patent law applicable to the procurement of Adkins' patent and to the determination of the scope of the claimed invention and whether the claims of the patent were infringed by the Michigan steel gyros. However, he now seeks dismissal of the Writ (at pp. 41-42 of his Brief) on the ground that the failure of the court below, no matter how egregious, to apply those criteria raises no substantial federal question.

No such argument was made by Adkins in his Brief in Opposition to the Petition. On the contrary, that brief at pages 33-35 opposed the grant of the Writ on the ground that the court below had properly applied the requisite criteria of federal patent law, not on the ground that no substantial federal question was involved. Adkins now makes no effort to bring to the attention of the Court any "considerations bearing on the issues relevant to the proper application of basic criteria of federal patent law" which "were not apprehended" at the time certiorari was granted.

A basic issue which is directly involved in the enforcement of a patent under an agreement is the ascertainment of what infringes the patent in order to determine the products upon which royalties should be paid under the agreement. The enlargement of the scope of a patent by a state court to encompass products (e.g. Lear's Michigan steel gyros) which do not meet the tests for infringement under the federal patent laws, raises a substantial federal question.

Any enlargement of patent rights beyond the limits of federal patent law, whether by private agreement or by application of state law, has been condemned by this Court. *United States v. Masonite Corporation* (1942), 316 U.S. 265; *Precision Instrument Manufacturing Company v. Automotive Maintenance Machinery Company* (1945), 324 U.S. 806; *Scott Paper Co. v. Marcalus Manufacturing Company, Inc.* (1945), 326 U.S. 249; *Sears, Roebuck & Co. v. Stiffel Company* (1964), 376 U.S. 225; *Brulotte v. Thys Company* (1964), 379 U.S. 29.

Clearly, the limited scope of the consideration given by the Court, in the only case cited on this point by Adkins,[23] to the proper application by a state court of the state's rules of criminal procedure, provides no basis for a conclusion that the failure of the court below to apply basic federal criteria in the enforcement of a patent involved no substantial federal question.

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[23] *Beck v. Washington* (1962) 369 U.S. 541, 551-555, cited at page 42 of Adkins' Brief.

steel gyros which constitute more than 98% of the products involved here,[28] and because Lear is estopped from contesting the validity of Adkins' patent which as a matter of law has been adjudicated invalid by the only court that has considered that issue.[29]

III.

ADKINS' ARGUMENTS CONCERNING LICENSEE ESTOPPEL ARE BASED UPON THE ENFORCEMENT OF PURPORTED COMMON LAW RIGHTS UNDER STATE LAW, AND THEY AVOID THE ISSUES OF FEDERAL LAW THAT ARE BEFORE THIS COURT.

Adkins' Points III-B, C and D are directed to various general public policy considerations which the Government and Lear have urged call for rejection of the doctrine of licensee estoppel. Points III-E, F and G, on the other hand, are directed to the particular circumstances here involved which Lear has urged are such as to require that such doctrine be rejected in any event in this case.

Adkins' questions concerning licensee estoppel are similar to Lear's questions, with the exception that Adkins has no question corresponding to Lear's question 2(c) and the further exception that Adkins' question 6 does not relate to the issues of this case.[30]

In Section A below, of this Section III of our brief, we shall seek to correct certain basic errors in Adkins'

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[28]A-I. 73.

[29]A-I. 81.

[30]As shown on Annex I, Adkins' questions 4, 5 and 7 are similar to Lear's questions 2, 2(a) and 2(b). Adkins' question 6 is based upon rights in an invention regardless of patentability and hence does not relate to the issues of this case.

arguments directed to general public policy considerations.

In Section B we shall seek to correct certain of his statements directed to the particular circumstances of this case.

At the outset, however, we point out that in his Point III-A Adkins, although purportedly directing his argument to the general policy underlying the licensee estoppel doctrine, in fact addresses himself to the particular circumstances of this case. He does so by arguing[31] that a valid patent was not a part of the bargain between Lear and Adkins. In Section B below, we shall show that, on the contrary, the patentability of Adkins' invention was at the heart of Lear's agreement with him. Even if this were not so, the unexpressed premise of Adkins' argument is that, regardless of whether the doctrine of licensee estoppel contravenes the patent and antitrust laws, the parties may by agreement preclude the licensee from challenging the validity of his licensor's patent. Such a result would, contrary to this Court's holding in *Pope Mfg. Co. v. Gormully* (1892) 144 U.S. 224, permit the parties by agreement to circumvent the very policies of the patent and antitrust laws, which, for reasons expressed by the Government and Lear in our opening briefs, militate against any such estoppel of the licensee.

A. The Broad Aspects of Licensee Estoppel.

Adkins, in Point III-B of his brief, enunciates as a basis for licensee estoppel a "public policy in favor of enforcing contracts", which he urges is evidenced by *Kelly v. Kosuga* (1959) 358 U.S. 516. However,

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[31]R. Br. 56.

Adkins ignores an equally strong public policy which, consistently with that case and entirely apart from special patent policy considerations, requires performance of a bilateral contract by one party only where the consideration specified under the contract is actually furnished by the other party, and always permits either party to show failure of consideration in defense of his own nonperformance. In the *Kelly* case, the seller had received the goods which he had bargained for, but refused to make payment for them. On the contrary, Lear as licensee under an invalid patent has received nothing. The fallacy in Adkins' argument is his assumption that the statutory presumption of validity results in a conclusive presumption of the validity of such patent as between any patentee and his licensee, thereby foreclosing the defense of failure of consideration in all contracts involving patents.

In Point III-C, Adkins bases his argument on the broad aspects of the law concerning licensee estoppel[32] upon *Automatic Radio Mfg. Co. v. Hazeltine Research* (1950), 339 U.S. 827. He asserts that the decision in that case stands for the proposition that licensee estoppel should apply under state contract law unless the doctrine is being used to enforce some misuse or extension of the patent grant.[33]

However, the application of licensee estoppel under state law by the California Supreme Court prevents the ascertainment of a federal question of law (*i.e.*, whether Adkins' patent meets the Constitutional standard for patentability), *Great A & P Tea Co. v. Supermarket Equipment Corp.* (1950), 340 U.S. 147; *Graham v.*

[32]R.Br. 63-73.
[33]R.Br. 68, 69.

John Deere Co. (1966), 383 U.S. 1, thereby thwarting the policy enunciated in *Sears, Roebuck & Co. v. Stiffel Co.* (1964), *supra* that uniform federal standards must be applied under the patent system.

Adkins recognizes the need for distinguishing *Sears, Roebuck & Co. v. Stiffel Company* (1964) *supra*, and the companion case of *Compco Corp. v. Day-Brite Lighting Inc.* (1964) 376 U.S. 234, but he does so on the very limited ground that these cases are applicable only if there is a holding of invalidity, at which time the patented device falls into the public domain. Even that distinction is of little significance because Adkins' patent has been held invalid by the Superior Court of California, the only court which has considered that question, and that holding has not been disturbed. Adkins erroneously described that court's determination of the invalidity of Adkins' patent as a nullity.[34] He disregards the fact that the case on which he relies, *Ponce v. Marr* (1956) 47 Cal. 2d 159, holds only that it is the decision of the intermediate court of appeal which, under the laws of the State of California, is rendered a nullity when a case is transferred from that court to the California Supreme Court. In the case at bar, the intermediate court of appeal did not consider the question of validity of Adkins' patent.

In support of his contention that the *Automatic Radio Mfg. Co.* case is consistent with other decisions of this Court, Adkins asserts[35] that the defendant was estopped from contesting validity in both *Scott Paper Co. v. Marcalus Manufacturing Co.* (1945), *supra*, and *Westinghouse Elec. & Mfg. Co. v. Formica*

[34]R. Br. 69.
[35]R. Br. 68.

II.

ADKINS IGNORES THE BASIC ISSUES OF MISUSE OF PATENT RIGHTS AND CONTRAVENTION OF THE POLICY OF THE ANTITRUST LAWS BY BASING HIS ARGUMENT ON COMMON LAW RIGHTS AND NOT ON PATENT RIGHTS.

Lear's Point I and the related question No. 1 of the Questions Presented assert that the construction of the license agreement to condition the right of the licensee to terminate the license, either before or after the patent issues, upon the cessation of manufacture of products purportedly covered by the license agreement is a misuse of patent rights and contravenes the policy of the antitrust laws.

Adkins' Point II glosses over and in effect ignores the basic issue of misuse of patent rights and contravention of the policy of the antitrust laws by basing his argument upon purported common law rights in an allegedly secret invention, rather than upon rights in inventions to the extent that they are patented or patentable, which is the express subject of the license agreement.[24]

Adkins' argument is with respect to his questions Nos. 2 and 3. Although his question No. 2 is similar to Lear's question No. 1, the related argument (Point II-A)[25] is directed to common law rights in the invention without regard to the rights and obligations of the parties based upon inventions that are patented or patentable (See Annex I, infra).

Adkins' question No. 3 is expressly based upon common law rights in an idea, discovery and invention, and

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[24]A-II.3, 4; Ex. 8 §§1(d), 2(a); R.T. 296.

[25]R.Br. 44-48.

it raises issues not involved here (See Annex I, infra). His argument (Point II-B)[26] concerning this question is not relevant.

Common law rights in unpatented or unpatentable inventions are not involved in the issues of this case, and such rights could not have existed under the circumstances of this case, as discussed above in the Introductory Statement.

Such common law rights are the subject of paragraphs XVI, XVII and XVIII of the complaint (A-I. 9) under Adkins' second cause of action. The California courts dismissed that cause of action (A-I.85, 212, 213) and based their decisions solely upon the license agreement.

In addition to asserting common law rights, Adkins asserts that there is no restraint of trade because all that Lear is required to do is pay royalties if it chooses to use Adkins' invention. However, this fails to take into consideration the subject matter of the agreement and the condition required for termination.

The California Supreme Court held that the license agreement requires that Lear either pay royalties irrespective of the validity of Adkins' presumed patent rights, or discontinue the manufacture of products allegedly covered by such patent rights, including products developed by Lear subsequent to execution of the license agreement, and even before issuance of the patent.

Adkins' premise that the California Supreme Court held only that all Lear is required to do is pay royalties if it chooses to use Adkins' invention, ignores the basic issues of patent misuse and restraint of trade that are

[26]R.Br. 49-52.

before this Court. For example, the licensees were required to pay royalties if they chose to use the licensed invention in the cases of *Brulotte v. Thys Co.* (1964). *supra; American Securit Company v. Shatterproof Glass Corp.* (3rd Cir. 1959) 268 F.2d 769; *National Lockwasher Co. v. Garrett* (3rd Cir. 1943) 137 F.2d 255; and *McCullough v. Kammerer Corporation* (9th Cir. 1948), 166 F.2d 759. Yet, in each of these cases the courts held that the agreement contained provisions that extended patent rights beyond their legitimate scope, and either the agreement or the patent was held to be unenforceable because of misuse of the patent rights.

The requirement that Lear pay royalties for patent rights that had not yet been granted (and which might never be granted) or cease manufacturing the devices purportedly covered by claims of the patent application which had not been allowed, is an unlawful attempt to exert rights before they came into existence. In accordance with the construction of the agreement by the California Supreme Court, the license agreement provides exclusionary rights with respect to Lear which had not been granted by the Patent Office. The requirement that Lear must discontinue manufacture of the devices of the agreement in order to terminate it before any patent has issued cannot be based upon any rights of Adkins under the patent laws. It therefore constitutes an abuse of patent rights in accordance with prior decisions of this Court, and also an unlawful restraint on Lear which renders the agreement unenforceable under 15 U.S.C. §1.

Lear is not attempting to keep both the invention and the royalties, as Adkins asserts. Lear endeavored to re-

linquish its rights under the license agreement so that all of Adkins' rights in the invention under the patent laws would revert to Adkins. Under such circumstances, Adkins would own whatever rights he has in the invention under the patent laws outright without the encumbrance of the license to Lear. Adkins would then be free under the patent laws to enforce his patent against Lear or any other alleged infringer.

Adkins argues that there is no violation of 28 U.S.C. §1498 because Lear has not been enjoined from manufacturing the products for the Government and because the statute does not prohibit the payment of royalties under a license agreement. However, the purpose of Section 1498 is to permit use by the Government of all inventions, without possible interference by injunction, and to protect the Government and its suppliers against payment of royalties on specious patents. Under 28 U.S.C. §1498, the Government and its suppliers are faced with the alternatives of paying royalties or showing that the patent is invalid. Neither the supplier nor the Government can be required to discontinue manufacture of the products under any circumstances. Under Adkins' argument, Lear and the Government are faced with the alternatives of discontinuing the manufacture of the products or paying royalties on a specious patent. The requirement that Lear cease manufacturing the products or pay royalties regardless of the validity of the patent contravenes the purpose of this statute and is against the public interest.

These alternatives are particularly onerous under the circumstances of this case because Adkins had nothing to do with the design or development[27] of the Michigan

[27] A-1. 75.

Insulation Co. (1924), 266 U.S. 342. These cases really support Lear's contention and do not support Adkins' contention. In *Scott Paper Co.* the Court refused to estop the assignor. In *Westinghouse Elec. & Mfg. Co.* the Court questioned estoppel as applied to the claims of a patent application, but found it unnecessary to decide that issue.

In *Scott Paper Co.* the Court found that the accused device was precisely that of an expired patent, and hence the patent laws prohibit any application of estoppel. Adkins asserts that Lear is not prejudiced by licensee estoppel because under the *Scott Paper Co.* case Lear can avoid liability if it can show that it is building the gyros solely according to the teachings of a single prior art patent. Adkins asserts that this also shows that the Government is wrong when it says, at pages 15-16, that the estoppel doctrine forecloses Lear's "free use of a technology" which is in the public domain.[36]

The technology covered by a patent claim may be broader in scope than the particular arrangements shown in a particular patent by several orders of magnitude. This is because a patent claim defines the metes and bounds of the patent grant in broad language so as to give the patent the widest scope permissible, whereas the particular arrangements disclosed in the drawings and specification of a patent only need to merely illustrate how to practice the invention. 35 U.S.C. § 112. The technology covered by a patent claim covers all ways of practicing the invention, whereas the technology covered by the drawings and description is limited to what is shown for illustrative purposes only.

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[36]R. Br. 68.

Moreover, even though a device does not follow a prior art patent exactly, it may not satisfy the requirements for patentability over the prior art so as to be covered by the claim of a valid patent. This is because all of the prior art is relevant to the issue of patentability, whereas only a single prior art patent is relevant to the issue of whether or not it is followed exactly.

In *Graham v. John Deere Co.* (1966), *supra*, this Court pointed out that 35 U.S.C. §103 emphasizes that to satisfy the requirements for patentability the subject matter must not be obvious in view of the prior art. This test of patentability is markedly different from the test that Adkins urges, *i.e.*, that Lear must follow a single prior art patent exactly in order to avoid liability, and that Lear is estopped to show that Adkins' claims read on the prior art, or that the subject matter of the claims would be obvious in view of all of the prior art taken collectively.

The test that Adkins urges results in the enlargement of a patentee's rights when the patent is enforced by agreement as compared to a patentee's rights when the patent is enforced apart from an agreement, since in the latter case all of the prior art is relevant, both individually and collectively. However, the pubic interest requires that a patentee's rights be subject to uniform standards whether under agreement or otherwise.

The rejection of whatever remains of licensee estoppel would be beneficial, and it would not be detrimental as Adkins contends, under Point III D.[37] It would upgrade patents by placing the enforcability of patent rights that are covered by agreements on the same basis

[37]R. Br. 75.

as the enforcability of patent rights apart from an agreement. Adkins' assertion that this should be a matter for Congress to decide, rather than the courts, ignores the every day requirement that the courts must insure that uniform federal standards are employed by the state courts in all patent matters.

Adkins' brief asserts that Congress has evidenced its approval of licensee estoppel by referring to the fact that some twenty years ago Congress failed to act on various bills which would have amended the Clayton Act so as to prohibit the non-use, assignment or licensing of patents in a manner which would result in an unreasonable restraint of trade and which would have expressly permitted a showing of the invalidity or limited scope of a patent in patent or antitrust ligitation.[38] However, this fact in no way supports the conclusion that Congress thereby evidenced its approval of the doctrine of licensee estoppel.

In the first place, the "non-estoppel" section of the bills was purely incidental to the legislative objective. "The heart of the bill[s]"[39], as stated by their sponsor, Congressman Voorhis, was to prohibit as an unlawful restraint of trade any use or non-use of patent or patent application which unreasonably limits the supply of an article in commerce, as well as any assignment or license of a patent or patent application which carries with it any price restriction. This basic prohibition was implemented by a number of other provisions, including the non-estoppel section.

Furthermore, no report on any of the bills was ever made by any committee to either House of Congress;

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[38]R. Br. 76, 77.

[39]89 Cong. Rec. 10916, Congressman Voorhis was referring to H.R. 3874 of the 78th Congress.

and during the only Congressional hearing with respect to any of such bills,[40] at which the basic objectives of the bill were extensively discussed, no witness seriously addressed himself to the question of licensee estoppel.

These Committee hearings, to which Adkins would attach great significance, were directed primarily toward a major amendment of the Clayton Act, were never printed, are not available in either the Library of Congress or the Library of this Court, and can be found only in the Government archives. None of the bills was ever reported out of the Committee or was the subject of floor debate. Adkins' assertion that such legislative history establishes that "Congress unquestionably knew of the existence of the doctrine of licensee estoppel" and evidences "its refusal to abolish" that doctrine is palpably contrary to the facts.

B. Licensee Estoppel Under the Circumstances of This Case.

With reference to licensee estoppel under the circumstances here, Adkins asserts in Points III A and E that patentability of his purportedly secret invention is irrelevant and should not be subject to review.[41] Thus, Adkins is endeavoring to bring a crucial aspect of this case under the common law relating to his allegedly secret idea, discovery and invention, so as to avoid the policies and provisions of the federal patent and antitrust laws. A license under patentable claims was the consideration for the agreement, and hence patentability cannot be irrelevant.

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[40]The hearing, held by the House Judiciary Committee in 1945, related to H.R. 97 of the 79th Congress, which was identical with H.R. 3874 of the 78th Congress.

[41]R. Br. 56, 61, 73, 78.

With reference to Lear's Point II.C.(a) concerning failure of consideration, Adkins asserts that patentability or validity are immaterial on the ground that Lear was granted the exclusive right to manufacture "the devices" and this gave Lear such a competitive advantage that the patent rights were unimportant.[42] However, the mere issuance of a patent does not grant the exclusive right to use the invention. The right to use an invention may depend upon other facts, such as the acquisition of rights under a basic patent which dominates the field or the acquisition of rights under patents covering detailed aspects of the device that are not covered by the patent in question. The issuance of a patent merely gives the patent owner or his licensee the right to exclude others from making, using, or selling any invention covered by the claims of that patent. 35 U.S.C. §154.

The mere issuance of a patent does not give the patent owner the presumptive right to exclusive use of the invention, it merely gives the owner the presumptive right to exclude others from using it. If the owner or licensee cannot exclude others from using the invention due to invalidity of the patent, then there is a complete failure of consideration.

Also with reference to Lear's Point II.C.(a) concerning the issue of failure of consideration, Adkins asserts that Lear did not renounce or repudiate the license agreement, but that it merely refused to pay royalties and asserted that it owned the invention so that it could not be sued in the Federal courts for infringement.[43]

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[42]R. Br. 56-58.

[43]R. Br. 80.

Lear's notice of termination, its subsequent refusal to recognize the agreement as being effective, its refusal to pay royalties, and its assertion of failure of consideration in the answer to Adkins' complaint, show that Lear no longer treated the agreement as being in existence (*Crew v. Flanagan,* (1954), 242 Minn. 549, 65 N.W. 2d 878).

Adkins had the right to sue Lear for infringement in the Federal courts, but he elected to sue for breach of contract in the state courts. Lear is entitled to contest validity in the state courts, just as it would be in the Federal courts.

Adkins' assertion that Lear contends that at all times after April 8, 1959, it has owned the invention and cannot be sued in the Federal courts is not supported by his reference to the brief[44] before the California courts, which states:

> "Defendant asserted the affirmative defense of release with respect to all matters not covered by the written license agreement of September 15, 1955 [Clk. Tr. p. 1499, line 28, to p. 1501, line 10]. The release document [Clk. Tr. p. 1504] specifically excludes only one item from the scope of the release. This item is the license agreement between the plaintiff and the defendant, i.e., the license agreement of September 15, 1955, which is Exhibit 8 in evidence. Therefore, by the express terms of the document containing the release the only thing excluded from the release were the mat-

[44]Reply Brief for Lear, Incorporated concerning the Directed Verdict and the Denial of Lear's Motion for Judgment Notwithstanding the Verdict, All With Respect to the 2156 Gyroscope, p. 29.

ters covered by this license agreement. As stated above, the only thing covered by the license agreement were the *patentable inventions* of the plaintiff as defined by claims patentable to Adkins. The license agreement did not cover any unpatentable ideas, discoveries or inventions . . ."

By agreement between the parties, and also by operation of law, Adkins is relegated to his patent rights to the extent that they are valid, and obviously Lear has not contended that it owns Adkins' patent or that it cannot be sued in the Federal courts for infringement of the patent. In fact an action brought by Lear in 1963 is pending in the Federal courts seeking a declaratory judgment of invalidity, unenforceability, and non-infringement of Adkins' patent, and Adkins has counterclaimed for infringement. The action has been stayed pending the outcome of this action, *Lear Siegler, Inc. v. Adkins* (9th Cir. 1964) 330 F. 2d 595.

With reference to Lear's Point II.C.(b) concerning licensee estoppel based upon a patent application which can be altered by amendment, Adkins argues that licensee estoppel is no different where a patent application is involved because, under the circumstances here, Lear received precisely what it bargained for since the patented apparatus falls within the scope of the initial application.[45]

However, this is based upon the finding by the California Supreme Court, which court refused to consider the file history and the doctrine of file wrapper estoppel in construing Adkins' patent (Point V-B herein), which applied a new principle of construction in con-

[45]R. Br. 82, 83.

travention of the federal patent laws (Point V-C herein), and which found infringement by applying a definition of the Michigan steel gyros that is contrary to mechanics and directly contrary to the uncontradicted evidence, including testimony by Adkins and Adkins' own exhibits (Point V-D herein).

The California Supreme Court relied upon and quoted language that was added by amendment in order to interpret the scope of Adkins' claims to cover Lear's Michigan steel gyros; yet it refused to consider whether or not the language added new matter in violation of the Federal patent laws (A-I.184 n. 19).

With reference to Lear's Point IIA concerning no equitable basis for estoppel, Adkins asserts that the elements of equitable estoppel are present because Lear represented to Adkins that in exchange for the cancellation of the 1951 agreement, Lear would pay royalties until final Patent Office action and thereafter if a patent issued.[46] The license agreement (A-II.1) makes no such representations, and the California Superior Court expressly ruled that no evidence would be received concerning representations by either party leading up to the consummation of the license agreement (R.T. 214-215, 294-295).

Adkins further asserts that licensors enter into license agreements in reliance upon the doctrine of licensee estoppel, and that Adkins did so here.[47] However, any such assertion fails to take into consideration the extent to which the doctrine of licensee estoppel had been restricted by the courts. *Sola Electric Com-*

[46]R. Br. 61.
[47]R. Br. 74.

pany v. Jefferson Electric Company (1942), *supra, Scott Paper Co. v. Marcalus Mfg. Co.* (1945), *supra, MacGregor v. Westinghouse Elec. & Mfg. Co.* (1947), *supra,* and *Katzinger v. Chicago Metallic Mfg. Co.* (1947), 329 U.S. 394. This is particularly true with respect to Adkins because at the time the 1955 agreement was consummated, the latest applicable decision in the California courts was *The Armstrong Company v. Shell Company of California* (1929), 98 Cal. App. 769, where the court stated at page 779:

> ". . . A licensee, if the patents are in fact invalid, may, without waiting to be evicted, denounce and abandon the license, and after giving notice thereof to the licensor, may defend against an action to enforce the license or to recover royalties subsequently accruing, with the same freedom as may a stranger to the patent, and the licensor is remitted to his infringement suit . . ."

A similar decision was rendered in 1954 (just before the license agreement was consummated between Adkins and Lear) by the Minnesota Supreme Court in *Crew v. Flanagan, supra,* which was discussed in the opening Brief for Petitioner.

Adkins has not responded to Lear's question 2(c) which is discussed in Point II.C(c) of the opening Brief for Petitioner, to the effect that Adkins cannot hide behind the shield of licensee estoppel under state law as a means for perpetrating the unlawful restraint which is imposed by the requirement that Lear discontinue the manufacture of the devices in order to terminate the agreement. Adkins merely states that Lear did not cease manufacturing the devices and hence

there was no restraint of trade. Adkins has not responded to the real issue which is whether the inclusion of a provision in restraint of trade in the license agreement makes it essential that Lear be permitted to contest patentability and validity under the decisions of this Court in such cases as *MacGregor v. Westinghouse Elec. & Mfg. Co.* (1947), 329 U.S. 402, and *Sola Electric Company v. Jefferson Electric Company* (1942) 317 U.S. 173.

IV.

ADKINS' ARGUMENT IN SUPPORT OF THE VALIDITY OF HIS PATENT MISSTATES THE UNDERLYING QUESTIONS OF LAW CONCERNING VALIDITY, AND IT RELIES ON A CONTRIVED INVENTION NOT WITHIN THE CLAIMS OF THE ORIGINAL APPLICATION OR THE CLAIMS OF THE PATENT.

Subparts C, D, and E of Section V of the Argument in Adkins' brief is addressed to the question of the validity of Adkins' patent. That Section is in response to Lear's question 3 of the Questions Presented as to whether Adkins' patent is invalid as a matter of law,[48] which question is comprised in and subsidiary to Lear's challenge of the application of licensee estoppel.

In an attempt to change the issues of patentability and validity as a question of law under Lear's question 3, Adkins argues that this Court is bound by facts which have been decided by a jury and that anticipation and obviousness are "basic factual inquiries" in accord-

[48]Adkins' "restated" question 12 is the counterpart to question 3 of the Questions Presented, but misstates the issues presented by question 3 by expanding the question beyond the simple question of law raised by Lear's question 3.

ance with his construction of this Court's decision in *Graham v. John Deere Co.* (1966), supra.[49] This construction is incorrect because in the *Graham* case this Court determined that obviousness was a matter of law.

What the prior art was and what the patentee did to improve upon it are questions of fact, which may become questions of law if structures are undisputed and are understood by the Court. Whether what the patentee did to improve upon the prior art constitutes invention is a question of law under either the anticipation or the obviousness test. *Bergman v. Aluminum Lock Shingle Corp. of America* (9th Cir. 1958) 251 F.2d 801, 812.

Accordingly, Lear is not seeking to have this Court review questions of fact which were decided by the jury, as Adkins contends. Lear is seeking the determination of a federal question of law as to whether the simple combination of three concededly old elements in the bearing-supporting apparatus art satisfies the requirements for patentable invention, based on facts which are similar to those reviewed by this Court in considering the validity of the combination patent in the case of *Great A. & P. Tea Co. v. Supermarket Equip. Corp.* (1950), *supra.*

Adkins also argues that any determination of the issue of patentability or validity should be upon remand to the California Supreme Court.[50] In support of this argument he relies on two cases that are not in point, *Abbott Laboratories v. Gardner* (1967) 387 U.S. 136, and *Oklahoma Natural Gas Co. v. Russell* (1923),

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[49]R. Br. 88.

[50]R. Br. 88.

261 U.S. 290. Adkins ignores the more applicable case of *Great A. & P. Tea Co. v. Supermarket Equip. Corp., supra,* where Mr. Justice Douglas stated in his concurring opinion:

> ". . . The question of invention goes back to the constitutional standard in every case. We speak with final authority on that constitutional issue as we do on many others." 340 U.S. 147, 156.

In the *Abbott Laboratories* case federal questions were being determined by the Federal courts. The district courts had ruled on the merits of the case, while the Court of Appeals held that there was no actual case or controversy and reversed the case without considering the merits. This Court found that there could be a pre-enforcement review of the Federal regulations involved therein, and that the decision by the Federal district court should more properly be reviewed by the Court of Appeals than by this Court. In the *Oklahoma Natural Gas* case, the plaintiffs were Oklahoma corporations operating under state law and had applied to the state supreme court for relief. As a part of this relief, the plaintiffs had requested a supersedeas pending the appeal in the state supreme court, which request was denied. The plaintiffs thereupon applied to the Federal district court for temporary injunctions. The Federal district court, however, did not rule on the merits on the ground that the bill was prematurely brought. This Court, however, found that the bill had not been prematurely brought, and that the Federal district court did have jurisdiction to consider the matter. Accordingly, since the merits of the case had not yet been considered by any court, this Court remanded the matter to the Federal district court with directions to proceed to trial.

However, in the instant case, there has been a trial on the merits and there has been a finding of invalidity of Adkins' patent as a matter of law as not meeting the standard of invention to satisfy the Constitutional standard. This question of federal law need not be returned to the state courts for determination, but may be decided by this Court without going beyond the prior art patents themselves.

In the argument on the question of validity, Adkins does not at any time refer to the claims of his patent, but rather sets forth a newly defined invention contrived for appeal purposes only. In setting forth his contrived patented invention[51] Adkins relies solely on testimony[52] concerning Lear's gyros which are, of course, the accused infringing products. Thereafter, Adkins employs this newly-contrived invention in his chart marked Figure 1, and again he ignores the claims of the patent. If he had discussed the invention on the basis of the claims of the patent it would be obvious that the purported invention is invalid as a matter of law. Yet the scope of every patent is limited to the invention described in the claims read in the light of the specification. *Motion Picture Patents Company v. Universal Film Manufacturing Company* (1917), 243 U.S. 502, 510.

The trial court first construed Adkins' patent as a matter of law as it was required to do (*Coupe v. Royer* (1895), 155 U.S. 565) and then compared that invention with the background skill of the calling evidenced by the prior art patents (A-I. 74-82). The invention as so construed by the trial court is completely con-

[51]R. Br. 102, 103.
[52]R.T. 379-381, 1492-1493.

sistent with the specification of Adkins' patent, while Adkins' contrived invention is not. For example, Adkins argues that the patented device utilizes a "permissive cooperation" among three concededly old elements.[53] The trial court found that the "asserted novelty of . . . [Adkins'] invention is the coacting relationship of a pair of surfaces" and that in the "device the inner element is capable of angular movement only." (A-I.76) The claim of the patent (Fig. 2 opposite page 52 of Lear's opening Brief) calls for a "mounting surface" on the bearing-receiving element or bearing cup and "supporting surfaces" on the supporting means to permit the bearing-receiving elements (what the trial court termed "the inner element") to be initially adjustably shifted into oriented position.

The claims of the patent call for coacting surfaces and the specification of the patent teaches the use of coacting surfaces, yet in his brief Adkins does not discuss coacting surfaces but refers to a nebulous "permissive cooperation" between elements.[54]

As stated in the patent, the bearing-receiving elements have a surface the shape of a portion of a sphere "adapted to seat against" the conical surface of the supporting means or the sockets in the gimbals.[55] The patent further teaches that because of the conical shape of the one surface and the spherical shape of the other surface, alignment can be accomplished by a rotating motion, i.e., angular tilt when the surfaces are engaging.[56]

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[53]R. Br. 102.
[54]R. Br. 102.
[55]A-II.23, Ex. 10, Col. 7, lines 32-37.
[56]A-II.23, Ex. 10, Col. 7, lines 39-45.

Thus, since Adkins' whole argument is based on a contrived invention rather than the claimed invention construed in view of the specification or teachings of the patent, it is not relevant to the issue of whether Adkins' claimed invention rises to the level of invention to satisfy the Constitutional standard noted in the *A. & P. Tea* case and in the *Graham* case. Even though the argument is irrelevant, we feel compelled to consider it to point out certain misstatements and fallacies.

In considering the prior art, Adkins discusses[57] the question of anticipation of his contrived invention under 35 U.S.C. §102, and he avoids the question of obviousness under 35 U.S.C. §103, which requires a consideration of the prior art as a whole and not on an item-by-item basis.

In discussing the individual prior art patents for a consideration of the issue of anticipation, Adkins again makes many misstatements of fact, beginning with the one of the heading of the subsection D[58] that the uncontradicted evidence showed major differences between Adkins' patent and every prior art patent.[59] Additionally, the primary testimony relied on by Adkins is that of Mr. Lee, who was a partner in the firm that had represented Adkins at least since 1952 and that prepared Adkins' application for patent in 1953. Mr. Lee withdrew as counsel for Adkins near the end of the trial to

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[57]R. Br. 105-117. Figure 1 opposite p. 105.

[58]R. Br. 105.

[59]Since this matter is not directly relevant to the issue of validity before this Court, Lear will not discuss it in detail herein, but refers this Court to pages 159-200 and 284-328 of its "Respondent's and Cross-Appellant's Opening Brief" for a detailed discussion of this testimony.

act as an expert witness for Adkins. The trial judge found the testimony of this expert and Adkins' other experts not to be persuasive.[60]

The last subsection E of Adkins' argument on validity is directed to the secondary considerations of commercial success, etc. However, this whole subsection does not support the validity of Adkins' patent since Adkins again relies on the success of Lear's gyro products, which, as will be shown in Section V hereafter, do not infringe Adkins' patent and therefore do not use Adkins' invention.

V.

THE GROUNDS ON WHICH ADKINS SEEKS TO JUSTIFY THE ENFORCEMENT OF THE PATENT BY THE COURT BELOW IS IN CONTRAVENTION OF THE REQUISITE UNIFORMITY OF THE PATENT LAWS.

Lear's Point IV A of its opening brief and the related question 4(a) assert that a state court may not, consistently with the uniformity of federal patent laws, ignore defenses, such as fraud on the Patent Office, available in an infringement suit, in enforcing a patent in the state courts.

Adkins' Point V B attempts to justify the holding by the court below by merely making an independent analysis of the matter added to the specification by amendment, while ignoring the effect of the statements that defenses, such as fraud on the Patent Office, were inapplicable in a state court action for the enforcement of a patent under an agreement.[61]

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[60]R.T. 2595.

[61]Adkins' question 9 is the counterpart of Adkins' argument in Point V B of his brief. Adkins discussed this question in his

(This footnote is continued on the next page)

Lear's Point IV B and the related question 4(b) assert that a state court may not, consistently with the uniformity of federal patent laws, ignore basic criteria of federal patent law relating to interpretation of scope of a patent and infringement of a patent which would be applicable in any other proceeding for the enforcement of the patent.

Adkins' Point VI seeks to justify the conclusion by the court below that the doctrine of file wrapper estoppel was inapplicable, ignores the new principle of construction employed by the state court which directly conflicts with the patent laws, and attempts to justify the finding of infringement by the court below by misstating the basic facts upon which a finding of infringement must be based.[62]

A. Adkins' Attempt to Justify the Holding by the Court Below That Defenses, Such as Fraud on the Patent Office, Are Not Available in an Action to Enforce a Patent Under a License Agreement, Is in Contravention of the Patent Laws.

Adkins argues that the ruling by the court below decided the issue of fraud on the Patent Office.[63] However, the court below held that:

> "First, this is not a suit in which Adkins is attempting to enforce his patent as such, and we

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validity argument (his point V), but since it was originally discussed in Point IV A of Lear's opening Brief as an improper extension of the patent monopoly it will again be discussed in this context.

[62]Adkins' questions 10, 11, and 13 are covered by Adkins' Point VI. However, these questions, which are purportedly restatements of Lear's questions 4(a) and 4(b), misstate the issues involved and are based upon erroneous assumptions such as "uncontradicted evidence" in Adkins' favor which in actuality is uncontradicted in Lear's favor.

[63]R. Br. 101.

> are not concerned with defenses which might be available to Lear in the determination of questions of validity and infringement. The cause is based on rights emanating from a written agreement, and the patent itself is referred to only for the purpose of determining whether Lear used the invention therein set forth.[35] . . . [35]This reasoning also applies to other assertions by Lear that Adkins perpetrated fraud upon the Patent Office." (A-I.209)

The statement by the court below that the patented apparatus falls within the scope of the initial application (A-I.197), which is relied upon by Adkins to show that new matter was not added, does not take into consideration whether the scope of the claimed invention was enlarged, hence it is not relevant to the issue of new matter. The statement is also incorrect as a matter of law to the extent the court construed the language added by the amendment of December 19, 1958, to cover elements of any desired configuration which will permit angular adjustment (A-I.196). This is because the configuration attempted to be covered was in products sold more than two years before the amendment.

The original specification and all claims up to January 21, 1958, disclosed and claimed surfaces that were "engaging", or surfaces where one was "adapted to seat against" the other or one surface was "bearing thereagainst" the other, with these cooperating surfaces having the capability of angular tilt or relative angular movement (A-II.33-80, Ex. P, 1-49, R.T. 1328). Thus, the shape of the parts up to this time was such that there had to be cooperating surfaces that would permit

angular tilt for alignment when one surface was engaging or bearing against the other. The particular example of such surfaces used by Adkins to describe his invention was a spherical surface engaging a conical surface which necessarily forms the familiar ball-in-socket type joint.

Adkins asserts that the specifications do not expressly or even by implication require any one particular shape to accomplish the desired alignment.[64] However, the doctrine of equivalents limits the shapes, as a matter of law, to those that will cooperate when engaging or mating to permit angular tilt for alignment. *Graver Tank & Mfg. Co. v. Linde Air Products Co.* (1950) 339 U. S. 605.

Adkins makes the accusation (R. Br. 97) that Lear wrenches the word "engaging" out of context in asserting that contact was contemplated. However, a mere review of all claims in the application before the January, 1958 amendment and of the specification itself, shows that Adkins originally considered contact between the elements to be part of his invention. Additionally, the trial judge, in construing the patent as a matter of law held that "to separate the parts" would strip Adkins' invention of its assigned functions and instead of practicing the invention, it would be ignored.[65]

It was only by the new matter added to the specification by the amendment of December 19, 1958[66] and the claims thereafter based on such matter that Adkins changed to no contact and elements of any configura-

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[64]R. Br. 95.
[65]A-I.76.
[66]A-II.90, Ex. P, 58, R.T. 1328.

tion. This was an obvious attempt to cover the Michigan steel gyros after Lear had repudiated the agreement as far as these gyros were concerned on the ground that Adkins' application did not cover these gyros.[67]

The Patent Office had no way of knowing of the sales of the Michigan steel gyros, which sales were a statutory bar to the claiming of the structure of these gyros (35 U.S.C. §102), at the time of the attempt to change the specification and claims to cover the structure of these gyros. Therefore, the Patent Office could not consider whether the matter was barred by these sales. *Muncie Gear Works, Inc. v. Outboard Marine & Mfg. Co., Inc.* (1942), 315 U. S. 759; *Aetna Steel Products Corporation v. Southwest Products Company* (9th Cir., 1960) 282 F. 2d 323. However, Adkins did have such knowledge and it is this fact that forms the basis for the assertion of fraud on the Patent Office.

Furthermore, at the time of adding the matter to the specification, Adkins represented that it was not new matter and also filed oaths to this effect.[68] Now, however, by referring to language added by the amendment of December 19, 1958, Adkins asserts that contact is not required and that the claims cover elements having any configuration. The insertion of matter under the umbrella of a representation that it does not change the invention and then relying on this added language later in an attempt to cover different structures is fraud as a matter of law.

In addition to relying on the matter added by the amendment of December 19, 1958, to broaden the con-

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[67]A-II.26, Ex. 36, R.T. 505.

[68]A-II.94, 104, Ex. P. 62, 72, R. T. 1328.

figuration of the elements and to separate the parts, Adkins has to rely on this matter to support his assertions that the bearing cups (bearing-receiving elements) can be aligned without the bearings in place and that the bearings are replaceable. The original specification does not disclose these features, yet Adkins relies upon such features in his Argument concerning distinctions over the prior art.[69]

B. The Grounds on Which Adkins Seeks to Justify the Conclusion by the Court Below That the Doctrine of File Wrapper Estoppel Was Inapplicable Is in Contravention of Basic Criteria of Federal Patent Law.

Adkins endeavors to make an independent analysis of the file history to support the court's construction of the claims, rather than answering Lear's Argument that the court was required to consider the file wrapper, but refused to do so.

Adkins' analysis of the file history is incorrect as a matter of law. Adkins' initial assertion regarding the file history concerns what was in original claim 9 filed on February 15, 1954. On page 123 Adkins asserts that original claim 9 "was an apparatus claim claiming a structure which did not impose any shape limitations on the bearing cups or receiving holes." In the first place, original claim 9 does not call for a bearing cup and additionally, original claim 9 and in fact the entire application, never called for receiving holes. Original claim 9 is directed solely to the alignment of a bearing without a bearing cup.[70]

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[69]R. Br. 103, 105.

[70]A-II.57, Ex. P, 25.

Next, the statement on page 123 concerning amendment B is also incorrect in that the amendment to claim 9 did not require the bearing cup to be convex, but rather required the peripheral curved surface of the bearing to be convex, since there was no bearing cup.[71] Furthermore, amendment B did not require the receiving hole to be concave because there was no receiving hole, but rather required the mating surface of the bearing-receiving member to be concave.

Moreover, Adkins' purported construction of the allowed claims in view of the file history is in direct derogation of the criterion enunciated by this Court in *Schriber-Schroth Co. v. Cleveland Trust Co.* (1940), 311 U.S. 211, 221 that:

> ". . . Where the patentee in the course of his application in the patent office has, by amendment cancelled or surrendered claims, those which are allowed are to be read in the light of those abandoned and an abandoned claim cannot be revived and restored to the patent by reading it by construction into the claims which are allowed . . ."

On page 124 of his brief, Adkins attempts to revive the abandoned claims 23, 24, and 26, which called for generally circular apertures in the supporting member (which is the configuration utilized in the Michigan steel gyros), by reading this configuration into allowed claim 9. This is exactly what is condemned by the *Schriber-Schroth Co.* case.

Adkins cites the cases of *Smith v. Snow* (1935), 294 U.S. 1; *Westinghouse Electric Mfg. Co. v. Condit Elec-*

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[71]A-II.57, 77, Ex. P, 25, 45.

tric Mfg. Co. (1911), 194 Fed. 427; and *Joints, Inc. v. Garret* (S.D. Cal. 1952), 102 Fed. Supp. 760, for the proposition that the doctrine of file wrapper estoppel does not apply where the allowed claims are new and broader claims. However, even if these cases stand for this proposition, they are not applicable here where the allowed claims are narrower than the claims Adkins is attempting to revive. The claims that Adkins is attempting to revive, i.e., claims 23, 24, 26, are broader in that the elements do not have any particular surfaces but rather one element has an aperture and the other element only had to be adapted to fit within the aperture. Thus, the cases cited are inapplicable.

Moreover, these cases are inapplicable on another ground because they deal with the situation where claim language is broadened on the basis of the original specification and not where the original specification was altered by amendment to enlarge its scope, which is the circumstance here.

Finally, Adkins' attempt to construe the allowed claims in view of the file history and to consider whether there is a file wrapper estoppel does not alter the fact that the court below ignored the basic criteria of federal patent law which requires a consideration of the file history and the doctrine of file wrapper estoppel in construing and enforcing a patent.

The California Supreme Court's ruling that "there is no basis for an estoppel because the particular claims at issue had not been previously rejected and thus had

not been limited by Adkins as the result of a prior rejection"[72] would permit an unwarranted extension of a patent monopoly in California if permitted to stand. By filing a new set of claims, at the end of the proceedings before the Patent Office, a patentee who enforces his patent under California law would be able to avoid one of the most basic criteria that is applicable in the enforcement of a patent in the federal courts.

C. The Argument in Adkins' Brief Does Not Consider the New Principle of Construction Employed by the Court Below in Contravention of the Federal Patent Laws.

Adkins in no way addresses himself to the erroneous new principle of construction employed by the California Supreme Court or to the fact that this new principle of construction runs counter to the basic principle of patent law that the invention of a patent cannot cover prior art. When considering the configuration of the elements in the different apparatus for supporting bearings, as the California Supreme Court purported to do in applying its new principle of construction, the claims are given such a broad interpretation that they are invalid as covering prior art. The court stated:[73]

> "We are unable to discern any specific or inferential language of exclusion of the configurations utilized in the steel gyros."

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[72] A-I.197.
[73] A-I.196.

However, reference to the chart of Figure 8 opposite this page wherein the configuration of the elements in Adkins' patent, the Michigan steel gyros, and the Schwan patent are compared to claim 9 of Adkins' patent, as previously done verbally (pp. 59, 60, and 76-77 of Lear's Opening Brief), shows that the application of the new principle of construction developed by the court below renders Adkins' claims invalid as covering prior art, such as that of the Schwan patent. If the Michigan steel gyros are not excluded, neither is the apparatus of the Schwan patent.

Since the California Supreme Court ignored certain basic criteria in contravention of the federal patent laws in making its determination of infringement of Adkins' patent, the question of infringement must be decided anew. This question may be decided by this Court merely by comparing the invention claimed and described in Adkins' patent with the Michigan steel gyros in accordance with the rule that infringement, in such a case, can be determined as a matter of law as recognized in *Singer Manufacturing Co. v. Cramer* (1904) 192 U.S. 265.

CLAIM 9

An apparatus for supporting bearings in aligned relationship which comprises.

a. a pair of bearing-receiving elements each providing means to removably support a bearing in a fixed relationship with said element,

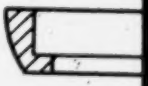
a.′ each of said bearing-receiving elements having a mounting surface by which it may be supported,

b. means for supporting said bearing-receiving elements at opposed relatively spaced positions,

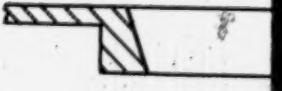
b.′ said supporting means providing supporting surfaces generally corresponding to said mounting surfaces and permitting said elements to be initially adjustably shifted relative to said supporting means into oriented positions where said bearing-supporting means are in alignment with each other.

c.* and means to retain said bearing-receiving elements in said oriented positions to permit pairs of bearings to be interchangeably mounted in aligned relationship supported by said bearing supporting means.











*Not shown on Adkins patent drawing, but described as solder, cement, weld, screws, etc. (Col. 7, lines 48 & 49 of Ex. 10) or generally as securing in place either mechanical or by cementing (Col. 2, lines 56 & 57 of Ex. 10).

CLAIM 9

An apparatus for supporting bearings in aligned relationship which comprises.

a. a pair of bearing-receiving elements each providing means to removably support a bearing in a fixed relationship with said element,

a.′ each of said bearing-receiving elements having a mounting surface by which it may be supported,

b. means for supporting said bearing-receiving elements at opposed relatively spaced positions,

b.′ said supporting means providing supporting surfaces generally corresponding to said mounting surfaces and permitting said elements to be initially adjustably shifted relative to said supporting means into oriented positions where said bearing-supporting means are in alignment with each other.

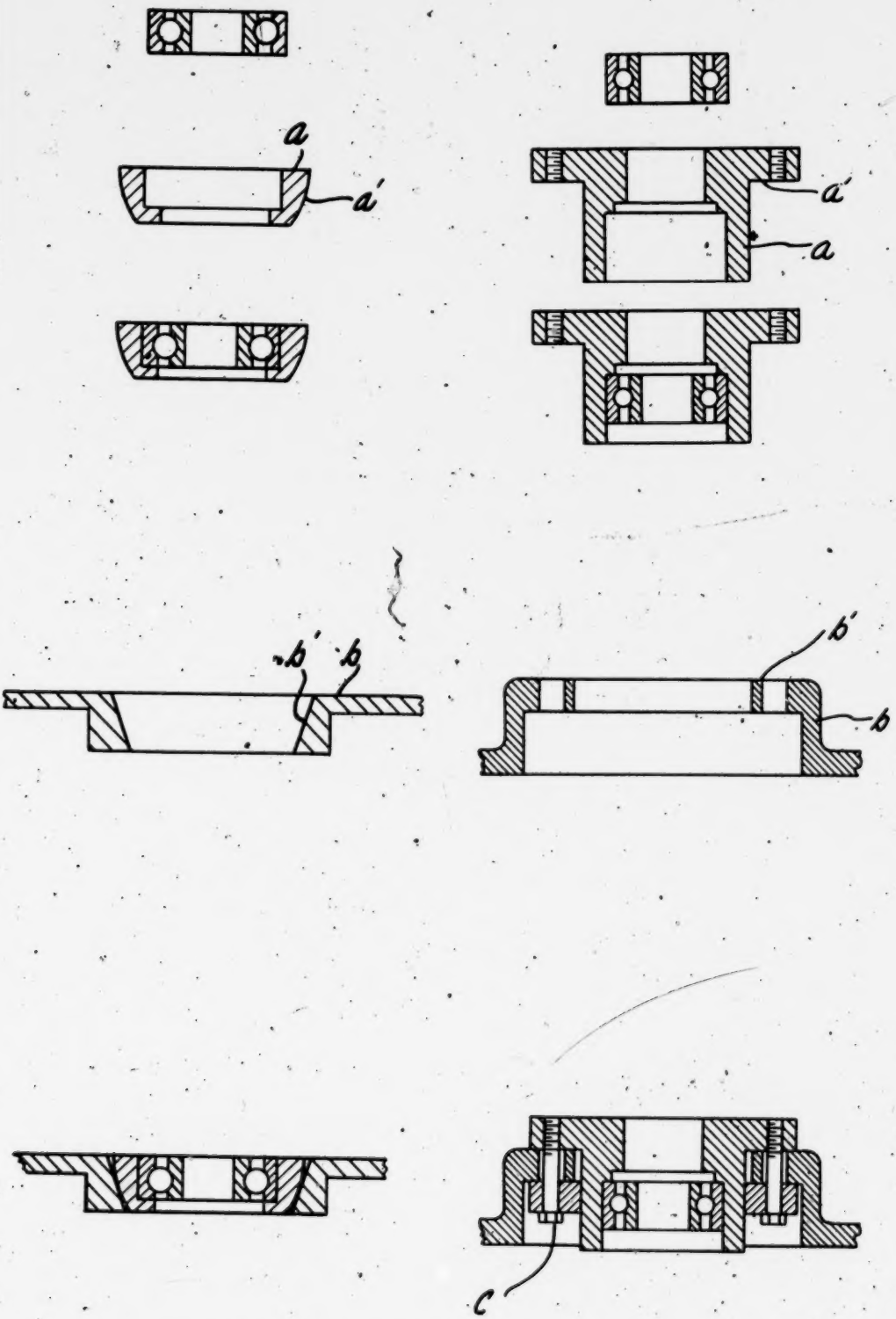
c.* and means to retain said bearing-receiving elements in said oriented positions to permit pairs of bearings to be interchangeably mounted in aligned relationship supported by said bearing supporting means.

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*Not shown on Adkins patent drawing, but described as solder, cement, weld, screws, etc. (Col. 7, lines 48 & 49 of Ex. 10) or generally as securing in place either mechanical or by cementing (Col. 2, lines 56 & 57 of Ex. 10).

ADKINS' PATENT 2919586

SCHWAN PATENT 2704693



CLAIM 9

An apparatus for supporting bearings in aligned relationship which comprises.

a pair of bearing-receiving elements each providing means to removably support a bearing in a fixed relationship with said element,

a.′ each of said bearing-receiving elements having a mounting surface by which it may be supported,

means for supporting said bearing-receiving elements at opposed relatively spaced positions,

b.′ said supporting means providing supporting surfaces generally corresponding to said mounting surfaces and permitting said elements to be initially adjustably shifted relative to said supporting means into oriented positions where said bearing-supporting means are in alignment with each other.

nd means to retain said bearing-re-eiving elements in said oriented posi-ions to permit pairs of bearings to be nterchangeably mounted in aligned elationship supported by said bearing upporting means.

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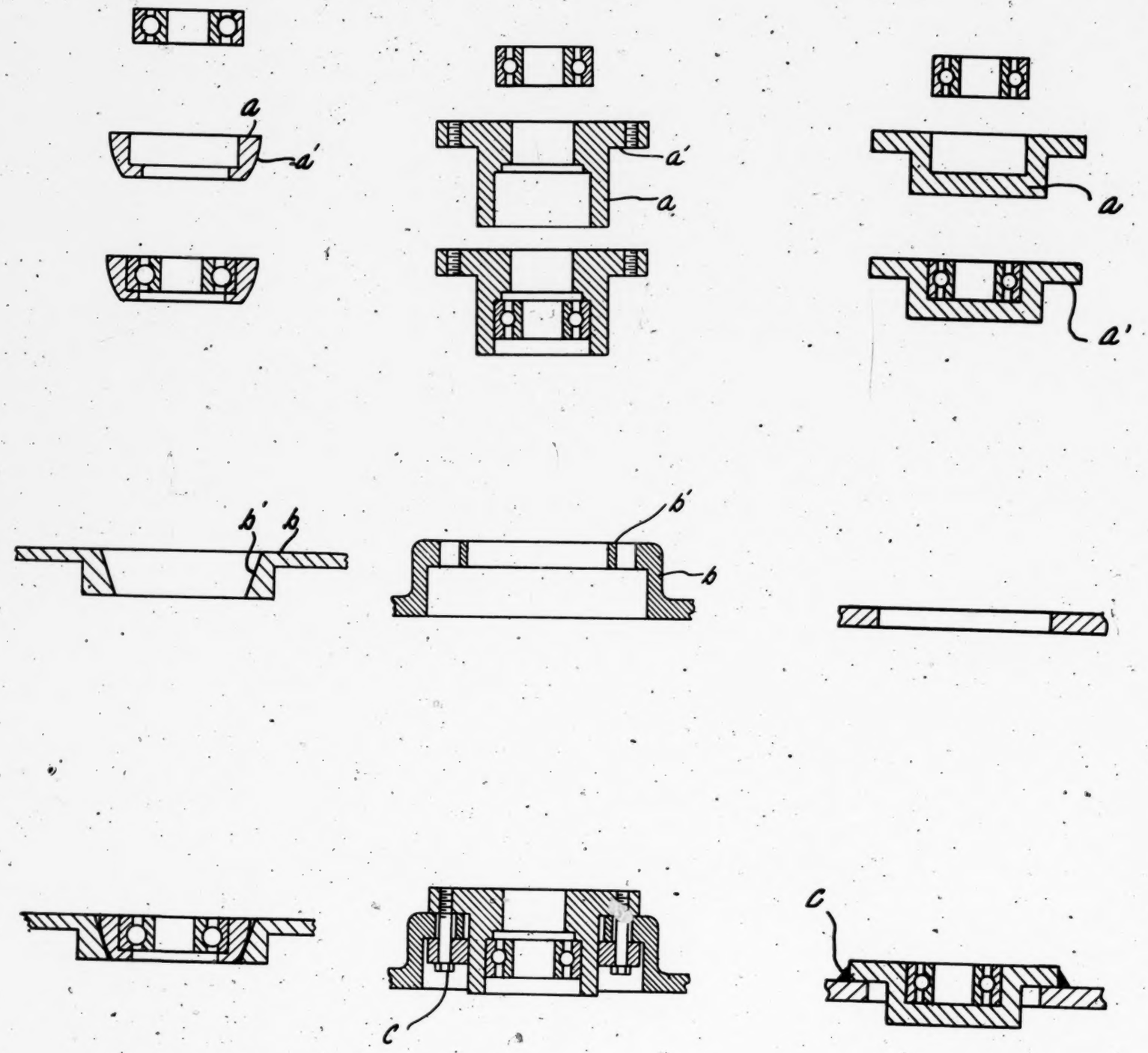


Figure 8

D. Under Adkins' Own Construction of the Patent There Is No Infringement as a Matter of Law Since All of the Substantial Evidence Is That the Alignment in the Michigan Steel Gyros Is Not Accomplished by Angular Tilt.

The claims of Adkins' patent are merely directed to apparatus for supporting bearings[74] employing three concededly old elements, and not to some highly sophisticated device, as Adkins would like to have this Court believe.

Adkins states that every witness was in agreement that the patent teaches and claims angular tilt to accomplish alignment.[75] The California Supreme Court further elaborated on this and stated that the alignment of the bearing cups in the Adkins patent can be accomplished only by the angular displacement of the two cups to the axis of the mandrel.[76] In the Michigan steel gyros angular tilt of the bearing cups to the axis of the mandrel to accomplish alignment is impossible, and the Michigan steel gyros do not infringe the claims of the patent as a matter of law.

The error by the California Supreme Court in finding that angular adjustment of the bearing cups to the axis of the mandrel accomplished alignment in the Michigan steel gyros is most easily seen on Figure 9

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[74]A-II.23, 24, Ex. 10, Col. 8, lines 31-34.

[75]R. Br. 128.

[76]A-I.198.

opposite this page, wherein the alignment movement taught in Adkins' patent is compared with the lack of movement to accomplish alignment in the Michigan steel gyros, with the Michigan steel gyros drawing being taken from Fig. 7 of Lear's opening brief. The alignment in the Michigan steel gyros is not accomplished by angular tilt or any other movement of the bearing cups relative to the axis of the mandrel, but rather by imparting the alignment of the mandrel to the bearing cups through the affixing of the bearing cups to the opposite ends of the mandrel.

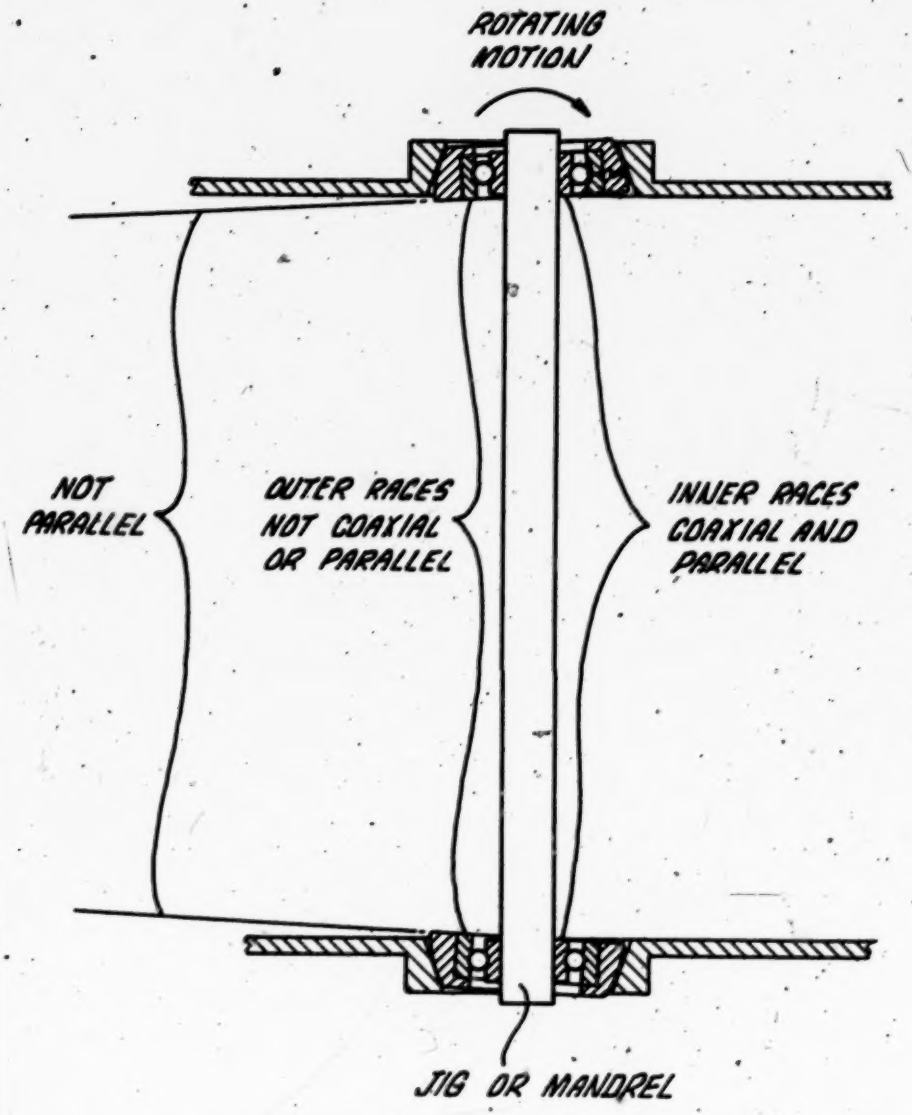
The court below was misled and now Adkins attempts to similarly mislead this Court by misstating the facts at pages 128-130 of his brief as to how the alignment is accomplished in the Michigan steel gyros. Adkins asserts that it is uncontradicted in the testimony that angular tilt accomplishes alignment in the Michigan steel gyros. However, Adkins' own Exhibit 59[77] states that

> "the Grand Rapids method does not require any rocking action [angular tilt] for alignment . . . This position is supported by the fact that the mandrel establishes an accurate center line between the two seats mounted thereon, so that regardless of any play between the holes of the casing and the seats, the center line remains. Stated otherwise, the accurate fit between the mandrel and the bearing seats dispenses with any need of rocking [angular tilt] to cause alignment."

Adkins himself testified that the parallel and coaxial alignment in the Michigan steel gyros is affected by the

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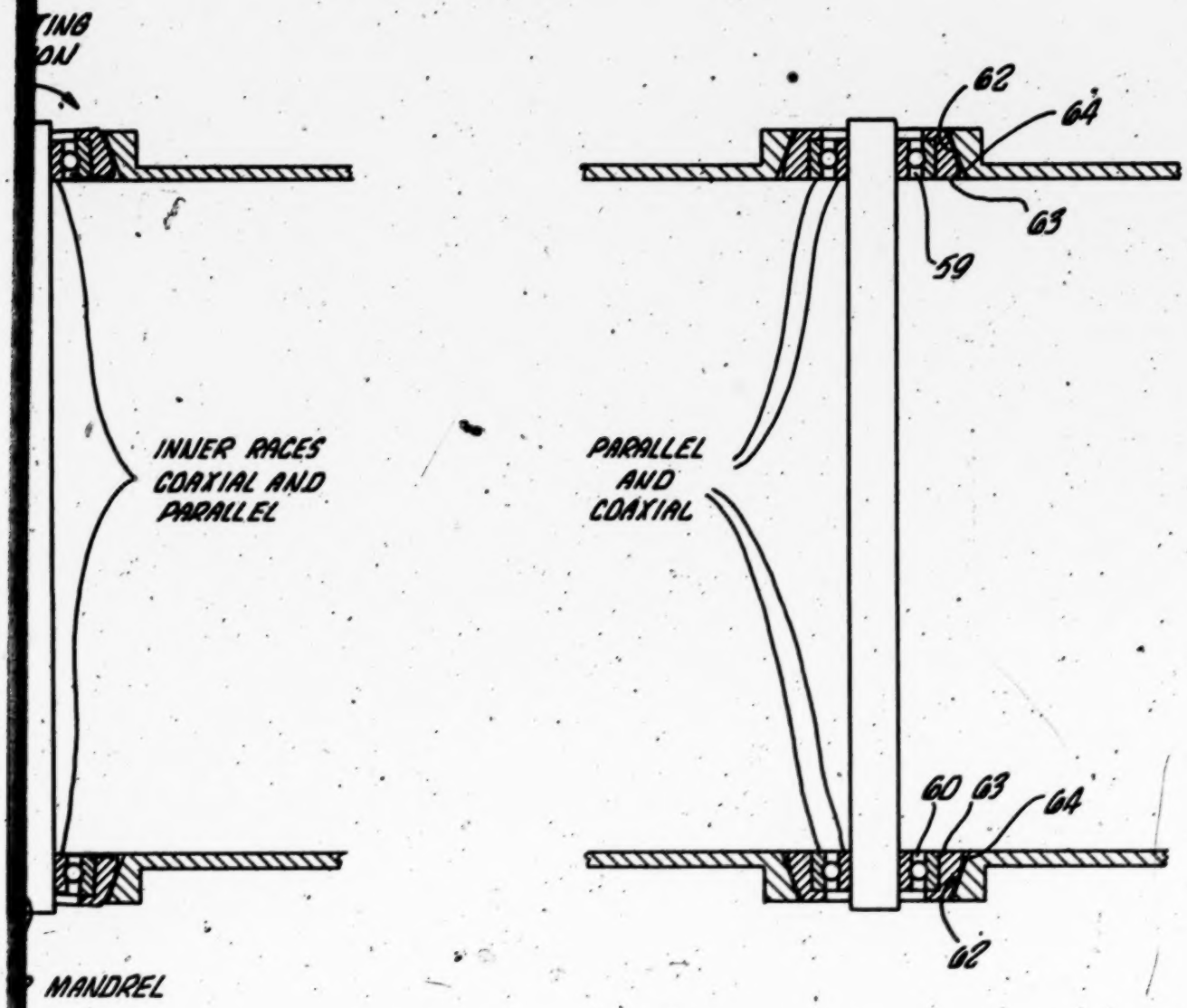
[77]Offered R.T. 1598, 1865; admitted R.T. 1870.



"The jig used in aligning the bearings may be very simple and in one form takes the shape of a cylindrical rod upon which the bearings are slid preparatory to mounting in their supports. The rod is, of course, accurately formed to be round, without taper, and straight." (A-II. 23, Ex. 10, Col. 7, lines 54-58.)

"Bearings that are used in gyros have inner and outer races . . . there is a looseness between the inner race and outer race." (R.T. 2488.)

ADKINS' PATENT

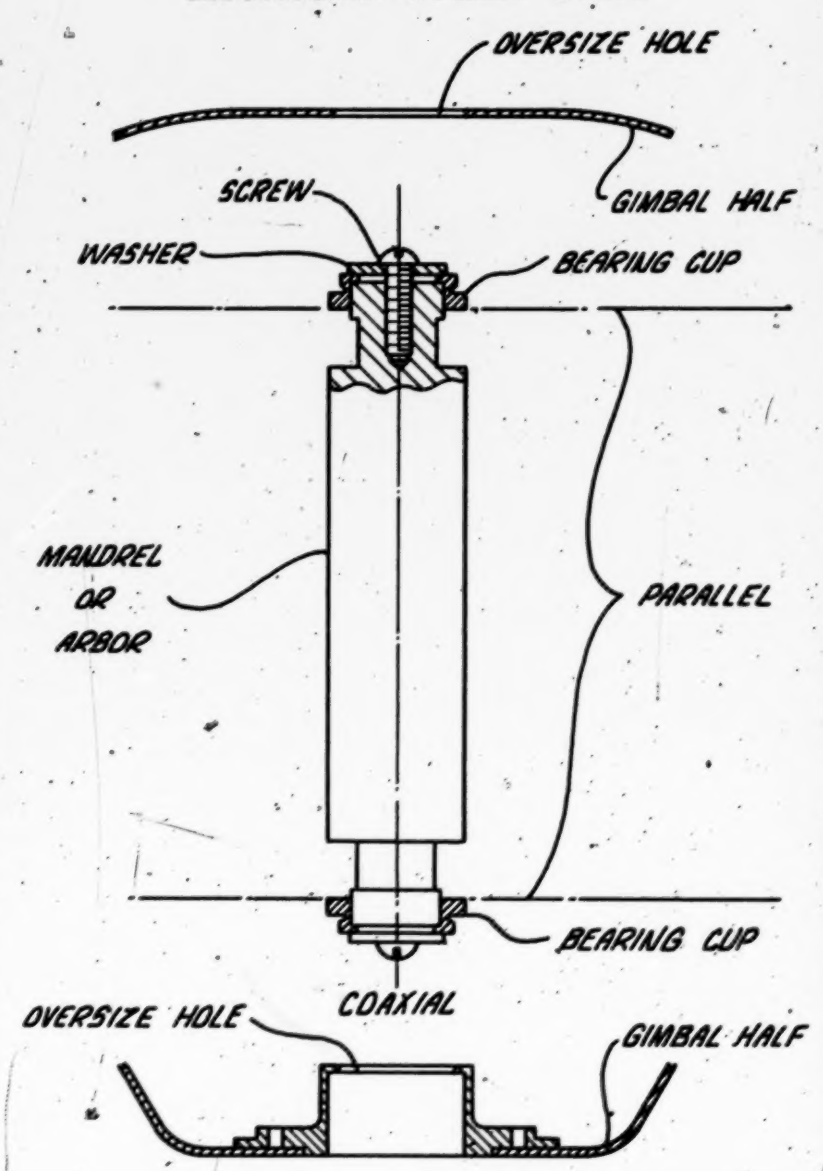


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accurately formed to be round,
A-II. 23, Ex. 10, Col. 7, lines

gyros have inner and outer
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"The bearings 59 and 60 are in turn secured to insert elements 63 each having an annular peripheral surface 64 of the shape of a portion of a sphere, adapted to seat against the conical surface 62. . . . Because of the conical shape of the surface 62 and the spherical shape of the peripheral surface 64 of the inserts, the axis of each bearing may be properly oriented by a rotating motion applied to the race. This latter motion can be easily accommodated by the engaging surfaces in view of their different curved shapes." (A-II. 23, Ex. 10, Col. 7, lines 34-35; Fig. 2 of Opening Brief.)

MICHIGAN STEEL GYRO



As a matter of simple mechanics, no relative movement between the bearing cups, no movement of either bearing cup to the axis of the mandrel, and no relative movement between either bearing cup and its associated gimbal half accomplishes or has anything to do with alignment.

The bearing cups are aligned once they are affixed to the mandrel. (Ex. 59, R.T. 1865, 2489-2493, 1447, 1214, 346, 347.)

mandrel or arbor.[78] Messrs. Ferrill and Carpenter also testified that rocking or angular tilt had nothing to do with accomplishing alignment in the Michigan steel gyros.[79]

Moreover, in another one of Adkins' exhibits[80] there is the statement:

> ". . . Adkins teaches the practice of rotating the bearing seats for alignment purposes, but that the mandrel used in the Grand Rapids method maintains the centerline between the two seats and it is merely necessary to move the mandrel to position the seats in the holes in the support for cementing."

After misstating the fact about how the alignment is accomplished in the Michigan steel gyros, Adkins states on page 129 that it is uncontradicted in the record that the literal language of claim 9 reads directly on all four steel gyros. This again is a misstatement of fact, since Mr. Ferrill, whom the trial judge found to be eminently qualified as a patent expert, and who had worked as an engineer on instrument landing systems at Sperry Gyroscope Company and on technical reports on gyro verticals and directional gyros at Sperry, and who had been a department head in the patent department at Sperry,[81] testified that the steel

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[78]R.T. 2489, 2491, 2493.

[79]R.T. 1213, 1214, 1465-1450.

[80]Ex. 55, offered R.T. 1598, admited R.T. 2112. This is a report written by Perry E. Turner who was at the time of the trial a partner in Mr. Lee's law firm and who was at the time of writing the report on April 15, 1955, a patent agent in the employ of Lear and who left the employ of Lear in December, 1957 to join Mr. Lee's law firm where he thereafter actively participated in the prosecution of Adkins' application for patent.

[81]R.T. 1271-1275, 1387-1391.

gyros did not infringe the claims of Adkins' patent under any possible theory.[82] Furthermore, the trial judge, in a colloquy, stated that the opinions of Adkins' experts, Messrs. Lee and Chesnut, were not persuasive.[83]

Moreover, this testimony does not even need to be considered, because as the trial judge stated "I do not see how as a matter of law, interpretation, logic or mechanics you can see any similarity in the Adkins (patented) device and the Michigan device" (R.T. 2596). It is clear from Figure 9 opposite page 50 th[illegible] the issue of infringement may be decided as a matter of law by a simple comparison of the apparatus of the claims and description in Adkins' patent and the apparatus of the Michigan steel gyros.

Adkins further asserts, beginning at page 131, that the Michigan steel gyros are covered under the doctrine of equivalents. However, reference to Figure 9 also shows that the elements in the Michigan steel gyros are not aligned in the same way as the elements in Adkins' claims. Accepting Adkins' construction of the claims, angular movement of the bearing cup relative to the axis of the mandrel accomplishes the alignment. This movement is physically impossible in the Michigan steel gyros.

Moreover, as stated by this Court in *Graver Tank & Manufacturing Company, Inc. v. Linde Air Products*

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[82]R.T. 1409-1416.

[83]R.T. 2595. Mr. Chesnut was not an attorney and was found to be not qualified as a patent expert (R.T. 2223-2239). Mr. Lee was a member of the firm that had represented Adkins since 1952 (Ex. X for identification, R.T. 1028), which was the firm that had filed and prosecuted the application for the patent involved herein (A-II.30, 67, Ex. P, 35) and which represented Adkins throughout most of the trial until Lee withdrew to testify on behalf of Adkins (R.T. 2315-2316).

(1950), *supra* where the doctrine of equivalents was employed, the doctrine may also be used to restrict the claim and defeat the action for infringement. This is the case here since in the Michigan steel gyros the alignment is accomplished in a substantially different way from the angular tilt of the bearing cup to the axis of the mandrel to accomplish alignment in Adkins' patent.

Adkins states at pages 132-134 that since Lear concedes that the claim of Adkins' patent covers the Model 2156 gyro, then the Michigan steel gyros must be covered. This statement by Lear on page 69 of its opening brief was based on the ground that the apparatus for supporting bearings in the Model 2156 gyro has spherical and conical surfaces that cooperate, when engaged, to permit angular motion before the parts are cemented. After the parts are positioned and affixed in place it does not matter how they got into position, and the same goes for the elements in the Schwan, Grenat, and Moody patents. Adkins states in the middle of page 132 that Ferrill testified that the holes in the gimbal halves of the Michigan steel gyros might approach the conical. This is a blatant misstatement, because Ferrill testified that the holes are substantially cylindrical.[84]

As a matter of law, Lear's Michigan steel gyros do not infringe the claims of Adkins' patent under any theory. This is a basic issue under the license agreement which requires the payment of royalties if Lear's products incorporate Adkins' patented invention, i.e., infringe the claims of Adkins' patent. Since the question of infringement is a question of federal law, this question should be decided by this Court.

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[84]R.T. 1418-1419.

VI.

THE CUT-OFF DATE FOR PAYMENT OF ROYALTIES.

Adkins Point IV[85] discusses the date to which Lear should be required to account to Adkins for royalties if Adkins' alleged invention is held to be unpatentable or if his patent is invalid. The cut-off date for royalties is so clearly established by general legal principles and by the authorities that Lear found it unnecessary to discuss this subsidiary question in its opening brief.

Adkins' conclusion that "elemental principles of equity as well as logic" would require payment of royalties until the date when a court of last resort holds the patent invalid, has no support in legal precedent, in equity or in logic.

Lear paid royalties to Adkins' in the amount of $30,735 and accounted for royalties to April 8, 1959, when it notified Adkins that it was terminating the license agreement.[86] Lear is not seeking to recover royalties already paid, but it denies any obligation to pay royalties after the renouncement and attempt to terminate the agreement on April 8, 1959.

Lear, in its opening brief, challenged (1) the enforceability of the agreement or the patent in its Points I and IVA (2) the consideration for the agreement in its Points II and III, and (3) infringement of Adkins' patent by Lear's Michigan steel gyros in Point IVB.

If the agreement (or the patent) is unenforceable (Points I and IVA), Adkins' claim for royalties under

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[85]Directed to Adkins' Question No. 8 which is shown in Annex I to be a subsidiary question as to remedy.

[86]R.T. 771.

the agreement must fail along with the agreement. *Sola Electric Company v. Jefferson Electric Company* (1942), *supra.*

If there is a failure of consideration (Points II and III), that is a complete defense to Adkins' claim for further royalties under the agreement. *Universal Rim Co. v. Scott* (N.D.Ohio, 1922) 21 F.2d 346; *Martin v. The New Trinidad Lake Asphalt Co. Ltd.* (D.N.J., 1919) 255 Fed. 93; *Mudgett v. Thomas* (S.D. Ohio, 1893), 55 Fed. 645; *Crew v. Flanagan* (1954), *supra; The Armstrong Company v. Shell Company of California* (1929), *supra.* The cases which Adkins asserts are contrary, such as *Automatic Radio Mfg. Co. v. Hazeltine Research* (1st Cir. 1949) 176 F.2d 799, and *Jungerson v. Kaysen* (1953) 173 Pa. 114, 95 A.2d 347, are based upon different considerations, such as the invalidity of only one of many patents covered by a license agreement.

If Lear's Michigan steel gyros do not infringe Adkins' patent (Point IV B), they are outside the scope of the license agreement and Adkins cannot have any claim for royalties on these products under the agreement.

Adkins addresses his argument only to the issue of failure of consideration in the event that his patent is held invalid. He asserts that part of the consideration was his common law rights in the idea, discovery or invention—to which the license agreement is a complete answer (A-II.1). He also asserts that until the patent

is held invalid by a court of last resort, the consideration does not fail because the licensee has received the right to manufacture under a presumptively valid patent. The complete answer to this assertion is that a patent does not confer the right to manufacture the subject matter of the patent even if the patent is valid, it merely provides the right to exclude others from manufacturing, using or selling the invention if the patent is in fact valid and enforceable. 35 U.S.C. §154.

If the invention of Adkins' patent promotes the progress of science and useful arts, as required by the Constitution, his contribution entitles him to exercise his patent rights. However, if Adkins' contribution does not satisfy the Constitutional standard, he never had the right to exclude others, including Lear, from using it. The license granted to Lear is then completely illusory.

If Adkins' contribution does not satisfy the Constitutional standard required for patentability, general principles of contract law compel the conclusion that Lear is not obligated to pay additional royalties for a consideration that failed.[87] Adkins is not entitled to damages for breach of contract because he contributed nothing that is entitled to patent protection.

The decision of the California Superior Court held that the Constitutional standard was not satisfied (A-I.80, 81), and that decision has not been disturbed,

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[87]Williston on Contracts, 3rd Ed., §§814, 884. Restatement of Contracts §§274, 277.

despite Adkins' assertion that the decision of the Superior Court is a nullity. *Ponce v. Marr, supra,* does not support Adkins, as previously discussed in Section III.

Adkins contends[88] that "to choose any date other than the final judgment of patent invalidity would clearly result in a windfall to Lear and thereby unjustly enrich Lear at Adkins' expense." The contrary is the case. The record contains no evidence of any "windfall" to Lear, and obviously there was none. After repudiation of the license agreement and the cessation of payment of any royalties, the royalty payments which Lear would have otherwise made to Adkins were no longer included in the cost of the gyros, which were sold primarily to the Government. Any such unpaid royalties would clearly have been disallowed if Lear had sought to include them in its costs. Hence, the charges for the gyros thus sold did not include any element of "windfall"; and if, despite a final determination of invalidity, it should now be held that Lear is obligated to pay royalties to Adkins from 1959 until some date in the future in the amount of several millions of dollars,[89] there would be no means for any recoupment by Lear from the Government or others of the amount thus paid, as a cost of gyros sold during that period. Indeed, the "windfall" would be to Adkins, not to Lear.

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[88]R. Br. p. 86.

[89]Royalties already amounted to $904,474.49 on May 31, 1963 according to the jury verdict (A-I.74).

VII.

ADKINS' SECOND CAUSE OF ACTION WAS DISMISSED BY THE CALIFORNIA COURTS AND ITS DISPOSITION IS NOT BEFORE THIS COURT.

Adkins' Point VII seeks to resurrect Adkins' original second cause of action, that asserts a common law misappropriation of the purported invention which is the subject matter of Adkins' patent application.

The issue which this question presents is whether this Court shall remand and direct a trial below of that cause of action if it determines, as a result of patent misuse, that the license agreement is unenforceable, or that as a result of patent invalidity, failure of consideration precludes recovery.

In his second cause of action Adkins asserted misappropriation of eleven ideas, discoveries and inventions (C.T. 596-597, 1404). At the outset of the trial, Adkins waived with prejudice all claims of misappropriation *except as to the invention* which is the subject matter of his patent (R.T. 162-163, 166). The California Superior Court then required Adkins to elect between the first cause of action, which is based solely upon the license agreement, and the second cause of action, which is based upon the common law. Adkins refused to do so. The Superior Court then dismissed the second cause of action (A-I.85), and the California Supreme Court affirmed that portion of the Superior Court's judgment (A-I. 212, 213).

Apart from the fact that nothing in federal law makes mandatory any revival by the California state

courts of the second cause of action, the sustaining of any such cause of action would involve the very clash of state law with federal patent policy which was the basis for this Court's decision in *Sears, Roebuck & Co. v. Stiffel Co.* (1964), *supra,* and *Compco Corp. v. Day-Brite Lighting, Inc.* (1964), *supra.* As stated by the California District Court of Appeal, "To permit Adkins to claim protection of that invention [of his patent] under the common law or any law of this state would be to 'give protection of a kind that clashes with the objective of the Federal patent laws'" (A-I.155).

Dated: November 7, 1968.

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ANNEX I

COMPARISON OF LEAR'S "QUESTIONS PRESENTED" WITH ADKINS' "RE

Questions of Adkins Related to Lear's Questions.

Lear's "Questions Presented" in Opening Brief for Petitioner	Adkins' Questions Similar to Lear's Questions	Adkins' Questions Miss by Lear
1. Do the termination provisions of the license agreement, as construed by the California Supreme Court, embody a patent misuse or contravene antitrust policy? (Pet. Brief, Point I)	2. Does the California Supreme Court's construction of the termination provisions of the license agreement violate the patent or antitrust laws or constitute a patent misuse? (Resp. Brief, Point II A)	
2. Is it contrary to the purposes and provisions of the patent and antitrust laws for a licensee to be estopped from challenging the validity of the licensor's patent or the patentability of the claims of his application (Pet. Brief, Points II A, B), particularly where (a) the licensee stands out from under the license agreement by notifying the licensor of his refusal to be bound thereby, and asserts failure of consideration because of the invention's non-patentability and the patent's invalidity? (Pet. Brief, Point II C (a)) (b) the patentability of the claims of the application is challenged by the licensee before any patent issues? (Pet. Brief, Point II C(b)) (c) the license agreement, as interpreted by the Court below, includes a provision which, in the absence of a valid patent, is unenforceable as a restraint of a trade? (Pet. Brief, Point II C(c))	4. Absent any patent misuse, does the doctrine of licensee estoppel conflict with the policy of either the patent laws or antitrust laws and thereby permit a licensee to question the validity of his licensor's patent? (Resp. Brief, Points III, A, B, C, D) 5. Even if the doctrine of licensee estoppel does not violate the patent and antitrust laws, may a licensee always stand out from under and repudiate a license agreement and then contest patent validity in order to show total failure of consideration? (Resp. Brief, Point III F) 7. Is the doctrine of licensee estoppel different where the license is initially under a patent application and shifts to a license under the claims of an issued patent? (Resp. Brief, Point III G)	
3. Does the record establish as a matter of law the unpatentability of the claims of Adkins' patent application and the invalidity of his patent? (Pet. Brief, Point III)	.....	12. Where a jury has found a reconsider every factual and lega the case to the highest State cou the issue of validity? (Resp. Brie
4. Is it an unlawful extension of the patent monopoly and contrary to federal patent laws for a state court, in enforcing a patent under a license agreement: (a) to ignore basic criteria of federal patent law relating to patent procurement which would be applicable in any other patent-enforcement proceeding? (Pet. Brief, Point IV A)	.....	9. Was "new matter" inserted i inclusion of such new matter co precluding recovery of royalties w new matter? (Resp. Brief, Point
(b) to ignore basic criteria of federal patent law relating to scope and infringement of the patent which would be applicable in any other patent enforcement proceeding? (Pet. Brief, Point IV B)	.....	10. Did the California Supreme for construction of claims, incor method claims into the issued ap VI (c)). 11. Did the California Suprem doctrine of file-wrapper estoppel, case? (Resp. Brief, Point VI. (b) 13. Where the jury finds the pa based on uncontradicted expert t independent determination of d relating to mechanical functioning devices and the accused devices?

ANNEX I

LEAR'S "QUESTIONS PRESENTED" WITH ADKINS' "RESTATED" QUESTIONS.

Related to Lear's Questions.

Similar to Lear's Questions

eme Court's construction of the termina-
agreement violate the patent or antitrust
isuse? (Resp. Brief, Point II A)

se, does the doctrine of licensee estoppel
her the patent laws or antitrust laws and
question the validity of his licensor's pat-
I, A, B, C, D)

censee estoppel does not violate the patent
censee always stand out from under and
t and then contest patent validity in order
deration? (Resp. Brief, Point III F)

ee estoppel different where the license is
lication and shifts to a license under the
Resp. Brief, Point III G)

Adkins' Questions Misstating the Issues Presented by Lear's Questions.

12. Where a jury has found a patent to be valid, should this Court reconsider every factual and legal issue relating to validity, or remand the case to the highest State court which has not squarely considered the issue of validity? (Resp. Brief, Point V A)

9. Was "new matter" inserted in the specifications, and, if so, did the inclusion of such new matter constitute fraud on the Patent Office, precluding recovery of royalties where no claim is based on any alleged new matter? (Resp. Brief, Point V B)

10. Did the California Supreme Court after correctly stating the rule for construction of claims, incorrectly read any part of the cancelled method claims into the issued apparatus claims? (Resp. Brief, Point VI (c))

11. Did the California Supreme Court after properly stating the doctrine of file-wrapper estoppel, correctly apply it to the facts in this case? (Resp. Brief, Point VI (b))

13. Where the jury finds the patent infringed by the accused device, based on uncontradicted expert testimony, should this Court essay an independent determination of documentary evidence and testimony relating to mechanical functioning of the patented device, the prior art devices and the accused devices? (Resp. Brief, Point VI (a))

Questions Raised Only by Adkins.

A. The Jurisdictional Question.

1. Was any substantial federal question properly raised in the California courts in order to confer jurisdiction on this Court under 28 USC §1257(3)? (Resp. Brief, Point I)

B. Subsidiary Questions as to Remedy.

8. What is the proper cut-off date for accrued royalties if a licensee is not estopped to question the validity of his licensor's patent and the patent is held to be invalid? (Resp. Brief, Point IV)

14. If the license agreement in this case fails because of patent invalidity or enforceability of the agreement, should the case be remanded for a trial on the alternative cause of action for misappropriation in breach of confidence, breach of implied-in-fact contract and unjust enrichment, which was dismissed as moot? (Resp. Brief, Point VII)

C. Questions Based Upon Erroneous Assumptions Raising Issues Not Involved in This Case.

3. Does an agreement to pay a royalty for the disclosure of an idea, discovery and invention which is also the subject of a secret patent application and is cancellable if no patent issues, constitute a retroactive misuse of the patent grant under the patent or antitrust laws which renders the license unenforceable? (Resp. Brief, Point II B)

6. Where a licensee bargains not for any particular claims of a patent application, but rather for the right to use the invention disclosed in the specifications of the application and then for issued claims which cover the invention, may he, under the agreement, assert that no claims could issue and challenge the "patentability" of the invention? (Resp. Brief, Point III E)

As the contractual language indicates, Adkins had not obtained a final Patent Office decision as to the patentability of his invention at the time the licensing agreement was concluded. Indeed, he was not to receive a patent until January 5, 1960. This long delay has its source in the special character of Patent Office procedures. The regulations do not require the Office to make a final judgment on an invention's patentability on the basis of the inventor's original application.[2] While it sometimes happens that a patent is granted at this early stage, it is far more common for the Office to find that although certain of the applicant's claims may be patentable, certain others have been fully anticipated by the earlier developments in the art. In such a situation, the Patent Office does not attempt to separate the wheat from the chaff on its own initiative. Instead, it rejects the application, giving the inventor the right to make an amendment which narrows his claim to cover only those aspects of the invention which are truly novel.[3] It often happens, however, that even after an application is amended, the Patent Office finds that some of the remaining claims are unpatentable. When this occurs, the agency again issues a rejection which is subject to further amendment.[4] And so the process of rejection and amendment continues until the Patent Office Examiner either grants a patent or concludes that none of the inventor's claims could possibly be patentable, at which time a final rejection is entered on the Office's records.[5] Thus, when Adkins made his original application in 1954, it took the average inventor more than three years before he obtained a final administrative decision on the patentability of his ideas, with the Patent

[2] 37 CFR § 1.111 (1967).
[3] 37 CFR § 1.106 (1967).
[4] 37 CFR § 1.112 (1967).
[5] 37 CFR § 1.113 (1967).

Office acting on the average application from two to four times.[6]

The progress of Adkins' effort to obtain a patent followed the typical pattern. In his initial application, the inventor made the ambitious claim that his entire method of constructing gyroscopes was sufficiently novel to merit protection. The Patent Office, however, rejected this initial claim, as well as two subsequent amendments, which progressively narrowed the scope of the invention sought to be protected. Finally, Adkins narrowed his claim drastically to assert only that the design of the apparatus used to achieve gyroscope accuracy was novel.[7] In response, the Office issued its 1960 patent, granting a 17-year monopoly on this more modest claim.

During the long period in which Adkins was attempting to convince the Patent Office of the novelty of his ideas, however, Lear had become convinced that Adkins would never receive a patent on his invention and that it should not continue to pay substantial royalties on ideas which had not contributed substantially to the development of the art of gyroscopy. In 1957, after Adkins' patent application had been rejected twice, Lear announced that it had searched the Patent Office's files and had found a patent which it believed had fully anticipated Adkins' discovery. As a result, the company stated that it would no longer pay royalties on the large number of gyroscopes it was producing at its plant in Grand Rapids, Michigan (the Michigan gyros). Payments were continued on the smaller number of gyros produced at the company's

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[6] Seidel, What the General Practitioner Should Know About Patent Law, at 61 (1956).

[7] Adkins actually amended his application a third time before he made the amendment which gained the approval of the Patent Office. This third amendment was superseded by the successful amendment, however, before the Patent Office considered it.

California plant for two more years until they too were terminated on April 8, 1959 (the California gyros).

As soon as Adkins obtained his patent in 1960, he brought this lawsuit in the California Superior Court. He argued to a jury that both the Michigan and the California gyros incorporated his patented apparatus and that Lear's failure to pay royalties on these gyros was a breach both of the 1955 contract and of Lear's quasi-contractual obligations. Although Lear sought to raise patent invalidity as a defense, the trial judge directed a verdict of $16,351.93 for Adkins on the California gyros, holding that Lear was estopped by its licensing agreement from questioning the inventor's patent. The trial judge took a different approach when it came to considering the Michigan gyros. Noting that the company claimed that it had developed its Michigan designs independently of Adkins' ideas, the court instructed the jury to award the inventor recovery only if it was satisfied that Adkins' invention was novel, within the meaning of the federal patent laws. When the jury returned a verdict for Adkins of $888,122.56 on the Michigan gyros,[8] the trial judge granted Lear's motion for judgment notwithstanding the verdict, finding that Adkins' invention had been completely anticipated by the prior art.[9]

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[8] For purposes of the present lawsuit, the parties stipulated that the jury would award only those damages accruing before May 31, 1963.

[9] Adkins also filed a second cause of action which contended that Lear had wrongfully appropriated a valuable trade secret and so was liable regardless of the validity of the inventor's contractual and quasi-contractual theories. The trial court, however, required Adkins to choose between his contract and tort claims. Since the California Supreme Court completely vindicated the inventor's right to contractual royalties, it was not obliged to consider the propriety of this aspect of the trial judge's decision. Consequently, the tort claim is not before us at this time.

Neither side was satisfied with this split decision, and both appealed to the California Court of Appeals, which adopted a quite different approach. The court held that Lear was within its contractual rights in terminating its royalty obligations entirely in 1959, and that if Adkins desired to recover damages after that date he was "relegated to an action for infringement" in the federal courts. 52 Cal. Rptr. 795, 806. So far as pre-1959 royalties were concerned, the court held that the contract required the company to pay royalties on both the California and Michigan gyros regardless of the validity of the inventor's patent. 52 Cal. Rptr., at 809.

Once again both sides appealed, this time to the California Supreme Court, which took yet another approach to the problem presented. The court rejected the Court of Appeals' conclusion that the 1955 license gave Lear the right to terminate its royalty obligations in 1959. Since the 1955 agreement was still in effect, the court concluded, relying on the language we have already quoted, that the doctrine of estoppel barred Lear from questioning the propriety of the Patent Office's grant. 67 Cal. 2d, at 907, 435 P. 2d, at 336. The court's adherence to estoppel, however, was not without qualification. After noting Lear's claim that it had developed its Michigan gyros independently, the court tested this contention by considering "'whether what is being built by Lear [in Michigan] springs *entirely*" (emphasis supplied) from the prior art. 67 Cal. 2d, at 913, 435 P. 2d, at 340. Applying this test, it found that Lear had in fact "utilized the apparatus patented by Adkins throughout the period in question." 67 Cal. 2d, at 915, 435 P. 2d, at 341, reinstating the jury's $888,000 verdict on this branch of the case.

II.

Since the California Supreme Court's construction of the 1955 licensing agreement is solely a matter of state

law, the only issue open to us is raised by the court's reliance upon the doctrine of estoppel to bar Lear from proving that Adkins' ideas were dedicated to the common welfare by federal law.[10] In considering the propriety of the State Court's decision, we are well aware that we are not writing upon a clean slate. The doctrine of estoppel has been considered by this Court in a line of cases reaching back into the middle of the 19th century. Before deciding what the role of estoppel

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[10] Adkins claims that we have no jurisdiction to decide the federal question presented because the company did not adequately preserve it in its argument before the State Supreme Court. We do not agree. While it is true that Lear did not ask the Supreme Court to repudiate estoppel entirely, it did seek to persuade the court to carve out an exception to the estoppel principle which was so sweeping as to undermine the doctrine's vitality completely. The company argued, on the basis of federal as well as state cases, that a licensee may escape the impact of estoppel simply by announcing that it has repudiated the licensing agreement, regardless of the contract's terms. See, *e. g.*, Respondent's and Cross-Appellant's Opening Brief in Cases Nos. 28624 and 30089, at 110–111.

The California Supreme Court rejected this argument on its merits:

"Lear relies on authorities holding that a licensee may terminate a license agreement upon notice to his licensor even though, prior to termination, there has been no adjudication of invalidation of the patent which is the subject of the agreement and that thereafter the licensee may challenge the validity of the patent. (See, *e. g.*, *The Armstrong Co.* v. *Shell Co. of Cal.* (1929), 98 Cal. App. 769, 778–779). This rule has no application if the agreement sets forth the particular circumstances under which terminations must occur. As stated above, such provisions must be complied with in order to effect a valid cancellation." 67 Cal. 2d, at 899, n. 15, 435 P. 2d, at 331, n. 15.

We clearly have jurisdiction to consider whether this decision is wrong. In doing so, we have the duty to consider the broader implications of Lear's contention, and vindicate, if appropriate, its claim to relief on somewhat different grounds than it chose to advanced below, especially when the California court recognized, in language we have already quoted, *supra*, at 2, that matters of basic principle are at stake.

should be in the present case and in the future, it is, then, desirable to consider the role it has played in the past.

A.

While the roots of the doctrine have often been celebrated in tradition, we have found only one 19th century case in this Court that invoked estoppel in a considered manner. And that case was decided before the Sherman Act made it clear that the grant of monopoly power to a patent owner constituted a limited exception to the general federal policy favoring free competition. *Kinsman* v. *Parkhurst*, 18 How. 289 (1855).[11] Curiously a second decision often cited as supporting the estoppel doctrine points clearly in the opposite direction. *St. Paul Plow Works* v. *Starling*, 140 U. S. 184 (1891), did not even question the right of the lower courts to admit the licensee's evidence showing that the patented device was not novel. A unanimous Court merely held that, where there was conflicting evidence as to an invention's novelty, it would not reverse the decision of the lower court upholding the patent's validity.

In the very next year, this Court found the doctrine of patent estoppel so inequitable that it refused to grant an injunction to enforce a licensee's promise never to contest the validity of the underlying patent. "It is as

[11] There are two other early cases which enforced patent licenses without a thorough consideration of the estoppel issues that were presented. In *Eureka Co.* v. *Bailey Co.*, 11 Wall. 488 (1870), the Court held that a licensee was obliged to overcome a "very strong presumption" of patent validity in order to avoid his royalty obligations, without indicating how much more compelling a showing was required than was considered necessary in an ordinary infringement action. In *Dale Tile Manufacturing Co.* v. *Hyatt*, 12 U. S. 46 (1888), this Court affirmed the decision of the New York state courts invoking the doctrine of licensee estoppel, on the ground that the estoppel question presented was one which only involved state law.

SUPREME COURT OF THE UNITED STATES

No. 56.—October Term, 1968.

Lear, Incorporated, Petitioner, v. John S. Adkins. | On Writ of Certiorari to the Supreme Court of California.

[June 16, 1969.]

Mr. Justice Harlan delivered the opinion of the Court.

In January of 1953, John Adkins, an inventor and mechanical engineer, was hired by Lear Incorporated for the purpose of solving a vexing problem the company had encountered in its efforts to develop a gyroscope which would meet the increasingly demanding requirements of the aviation industry. The gyroscope is an essential component of the navigational system in all aircraft, enabling the pilot to learn the direction and altitude of his airplane. With the development of the faster airplanes of the 1950's, more accurate gyroscopes were needed, and the gyro industry consequently was casting about for new techniques which would satisfy this need in an economical fashion. Shortly after Adkins was hired, he developed a method of construction at the company's California facilities which improved gyroscope accuracy at a low cost. Lear almost immediately incorporated Adkins' improvements into its production process to its substantial advantage.

The question that remains unsettled in this case, after eight years of litigation in the California courts, is whether Adkins will receive compensation for Lear's use of those improvements which the inventor has subsequently patented. At every stage of this lawsuit, Lear has sought to prove that, despite the grant of a patent

by the Patent Office, none of Adkins' improvements were sufficiently novel to warrant the award of a monopoly under the standards delineated in the governing federal statutes. Moreover, the company has sought to prove that Adkins obtained his patent by means of a fraud on the Patent Office. In response, the inventor has argued that since Lear had entered into a licensing agreement with Adkins, it was obliged to pay the agreed royalities regardless of the validity of the underlying patent.

The Supreme Court of California unanimously vindicated the inventor's position. While the court recognized that generally a manufacturer is free to challenge the validity of an inventor's patent, it held that "one of the oldest doctrines in the field of patent law establishes that so long as a licensee is operating under a license agreement, he is estopped to deny the validity of his licensor's patent in a suit for royalities. The theory underlying this doctrine is that a licensee should not be permitted to enjoy the benefit afforded by the agreement while simultaneously urging that the patent which forms the basis of the agreement is void." 67 Cal. 2d 882, 891, 435 P. 2d 321, 325–326 (1967).

Almost 20 years ago, in its last consideration of the doctrine, this Court also invoked an estoppel to deny a licensee the right to prove that his licensor was demanding royalties for the use of an idea which was in reality a part of the public domain: *Automatic Radio Manufacturing Co.* v. *Hazeltine Research, Inc.*, 339 U. S. 827, 836 (1950). We granted certiorari in the present case, 391 U. S. 912, to reconsider the validity of the *Hazeltine* rule in the light of our recent decisions emphasizing the strong federal policy favoring free competition in ideas which do not merit patent protection. *Sears, Roebuck* v. *Stiffel Co.*, 376 U. S. 225 (1964); *Compco Corp.* v. *Day-Brite Lighting Inc.*, 376 U. S. 234 (1964).

I.

At the very beginning of the parties' relationship, Lear and Adkins entered into a rudimentary one-page agreement which provided that although "[a]ll new ideas, discoveries, inventions etc. related to . . . vertical gyros become the property of Mr. John S. Adkins," the inventor promised to grant Lear a license as to all ideas he might develop "on a mutually satisfactory royalty basis."[1] As soon as Adkins' labors yielded tangible results, it quickly became apparent to the inventor that further steps should be taken to place his rights to his ideas on a firmer basis. On February 4, 1954, Adkins filed an application with the Patent Office in an effort to gain federal protection for his improvements. At about the same time, he entered into a lengthy period of negotiations with Lear in an effort to conclude a licensing agreement which would clearly establish the amount of royalties that would be paid.

These negotiations finally bore fruit on September 15, 1955, when the parties approved a complex 17-page contract which carefully delineated the conditions upon which Lear promised to pay royalties for Adkins' improvements. The parties agreed that "if the United States Patent Office refuses to issue a patent on the substantial claims [contained in Adkins' original patent application] or if such a patent so issued is subsequently held invalid then in any of such events Lear at its option shall have the right forthwith to terminate the specific license so affected or to terminate this entire Agreement . . . ." § 6.

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[1] Lear argues that this original agreement was not submitted in evidence at trial and so should not be considered a part of the record on appeal. The California Supreme Court, however, treated the agreement as an important part of the record before it, 67 Cal. 2d, at 906, 435 P. 2d, at 335; and so we are free to refer to it.

important to the public that competition should not be repressed by worthless patents, as that the patentee of a really valuable invention should be protected in his monopoly . . . . ." *Pope Manufacturing Co.* v. *Gormully*, 144 U. S. 224, 234 (1892).

Although this Court invoked an estoppel in 1905 without citing or considering *Pope's* powerful argument, *United States* v. *Harvey Steel*, 196 U. S. 310, the doctrine was not to be applied again in this Court until it was revived in *Automatic Radio Manufacturing Co.* v. *Hazeltine Research, Inc., supra*, which declared, without prolonged analysis, that licensee estoppel was "the general rule." 339 U. S., at 836. In so holding, the majority ignored the teachings of a series of decisions this Court had rendered during the 45 years since *Harvey* had been decided. During this period, each time a patentee sought to rely upon his estoppel privilege before this Court, the majority created a new exception to permit judicial scrutiny into the validity of the Patent Office's grant. Long before *Hazeltine* was decided, the estoppel doctrine had been so eroded that it could no longer be considered the "general rule," but was only to be invoked in an ever-narrowing set of circumstances.

B.

The estoppel rule was first stringently limited in a situation in which the patentee's equities were far more compelling than those presented in the typical licensing arrangement. *Westinghouse Electric & Manufacturing Co.* v. *Formica Insulation Co.*, 266 U. S. 342 (1924), framed a rule to govern the recurring problem which arises when the original patent owner, after assigning his patent to another for a substantial sum, claims that the patent is worthless because it contains no new ideas. The courts of appeals had traditionally refused to permit such a defense to an infringement action on the ground

that it was improper both "to sell and keep the same thing," *Faulks* v. *Kemp*, 3 F. 898, 903 (1880). Nevertheless, *Formica* imposed a limitation upon estoppel which was radically inconsistent with the premises upon which the "general rule" is based. The Court held that while an assignor may not directly attack the validity of a patent by reference to the prior state of the art, he could introduce such evidence to *narrow* the claims made in the patent. "The distinction seems a nice one but seems to be workable." 266 U. S., at 351. Workable or not, the result proved to be an anomaly: if a patent had *some* novelty *Formica* permitted the old owner to defend an infringement action by showing that the invention's novel aspects did not extend to include the old owner's products; on the other hand, if a patent had *no* novelty at all, the old owner could not defend successfully since he would be obliged to launch the direct attack on the patent that *Formica* seemed to forbid. The incongruity of this position compelled at least one court of appeals to carry the logic of the *Formica* exception to its logical conclusion. In 1940 the Seventh Circuit held that a licensee could introduce evidence of the prior art to show that the licensor's claims were not novel at all and thus successfully defend an action for royalties. *Casco Products Corp.* v. *Sinko Tool & Manufacturing Co.*, 116 F. 2d 119.

In *Scott Paper Co.* v. *Marcalus Manufacturing Co.*, 326 U. S. 249 (1945), this Court adopted a position similar to the Seventh Circuit's, undermining the basis of patent estoppel even more than *Formica* had done. In *Scott*, the original patent owner had attempted to defend an infringement suit brought by his assignee by proving that his product was a copy of an expired patent. The Court refused to permit the assignee to invoke an estoppel, finding that the policy of the patent laws would be frustrated if a manufacturer was required to pay for the use of information which, under the patent statutes, was

the property of all. Chief Justice Stone, for the Court, did not go beyond the precise question presented by a manufacturer who asserted that he was simply copying an expired patent. Nevertheless it was impossible to limit the *Scott* doctrine to such a narrow compass. If patent policy forbids estoppel when the old owner attempts to show that he did no more than copy an expired patent, why should not the old owner be also permitted to show that the invention lacked novelty because it could be found in a technical journal or because it was obvious to one knowledgeable in the art? As Justice Frankfurter's dissent indicated, *id.*, at 258–264, there were no satisfactory answers to these questions. The *Scott* exception had undermined the very basis of the "general rule."

C.

At about the time *Scott* was decided, this Court developed yet another doctrine which was profoundly antithetic to the principles underlying estoppel. In *Sola Electric Co.* v. *Jefferson Electric Co.*, 317 U. S. 173 (1942), the majority refused to permit a licensor to enforce the license's price-fixing provisions without permitting the licensee to contest the validity of the underlying patent. Since the price-fixing clause was *per se* illegal but for the existence of a valid patent, this narrow exception could be countenanced without compromising the general estoppel principle. But the *Sola* Court went further: it held that since the patentee had sought to enforce the price fixing clause, the licensee could *also* avoid paying royalties if he could show that the patent was invalid. Five years later, the "anti-trust exception" was given an even more extensive scope in the *Katzinger* and *MacGregor* cases.[12] Here, licensors

[12] *Edward Katzinger Co.* v. *Chicago Metallic Manufacturing Co.*, 329 U. S. 394 (1947); *MacGregor* v. *Westinghouse Electric & Manufacturing Co.*, 329 U. S. 402 (1947).

were not permitted to invoke an estoppel despite the fact that they sought only to collect their royalties. The mere existence of a price-fixing clause in the license was held to be enough to bring the validity of the patent into question. Thus in the large number of cases in which licensing agreements contained restrictions that were arguably illegal under the antitrust laws, the doctrine of estoppel was a dead letter. Justice Frankfurter, in dissent, went even further, concluding that *Katzinger* and *MacGregor* had done all but repudiate the estoppel rule: "If a doctrine that was vital law for more than ninety years will be found to have now been deprived of life, we ought at least to give it decent public burial." 329 U. S., at 416.

D.

The lower courts, both state and federal, have also hedged the impact of estoppel by creating exceptions which have indicated a recognition of the broader policies pointing to a contrary approach. It is generally the rule that licensees may avoid further royalty payments, regardless of the provisions of their contract, once a third party proves that the patent is invalid. See *e. g., Drackett Chemical Co.* v. *Chamberlain Co.*, 63 F. 2d 853 (1933). Some courts have gone further to hold that a licensee may notify the patent owner that he is repudiating his agreement, regardless of its terms, and may subsequently defend any action for royalties by proving patent invalidity. Note, The Doctrine of Licensee Repudiation in Patent Law, 63 Yale L. J. 125 (1953); Ellis, Patent Licenses § 328 (3d ed. Deller 1958). And even in the 19th century, state courts had held that if the licensee had not actually sold products incorporating the patent's ideas, he could challenge

the validity of the patent. See Forkosch, Licensee Estoppel in Patent Law, 20 Temple L. Q. 515, 529, n. 45 (1947).[13]

III.

The uncertain status of licensee estoppel in the case law is a product of judicial efforts to accommodate the competing demands of the common law of contracts and the federal law of patents. On the one hand, the law of contracts forbids a purchaser to repudiate his promises simply because he later becomes dissatisfied with the bargain he has made.[14] On the other hand, federal law requires that all ideas in general circulation be dedicated to the common good unless they are protected by a valid patent. *Sears, Roebuck* v. *Stiffel Co., supra; Compco Corp.* v. *Day-Brite Lighting Inc., supra.* When faced with this basic conflict in policy, both this Court and courts throughout the land have naturally sought to develop an intermediate position which somehow would remain responsive to the radically different concerns of the two different worlds of contract and patent. The result has been a failure. Rather than creative compromise, there has been a chaos of conflicting case law, proceeding on inconsistent premises. Before renewing the search for an elusive middle ground, we must reconsider on their own merits the arguments which may properly be advanced on both sides of the estoppel question.

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[13] In addition to the works cited in the text, a detailed explication of the development of estoppel doctrine may be found in Cooper, Estoppel to Challenge Patent Validity: The Case of Private Good Faith vs. Public Policy, 18 Western Res. L. Rev. 1122 (1967), and in Kramer, Estoppel To Deny Patent Validity—A Slender Reed, 23 N. Y. U. Intramural L. Rev. 237 (1968).

[14] See 1 A. Corbin, Contracts § 127 (1963); Treece, Licensee Estoppel in Patent and Trademark Cases, 53 Iowa L. Rev. 525, 528–530 (1967).

A.

It will simplify matters greatly if we first consider the most typical situation in which patent licenses are negotiated. In contrast to the present case, most manufacturers obtain a license after a patent has issued. Since the Patent Office makes an inventor's ideas public when it issues its grant of a limited monopoly,[15] a potential licensee has access to the inventor's ideas even if he does not enter into an agreement with the patent owner. Consequently, a manufacturer gains only two benefits if he chooses to enter a licensing agreement after the patent has issued. First, by accepting a license and paying royalties for a time, the licensee may have avoided the necessity of defending an expensive infringement action during the period when he may be least able to afford one. Second, the existence of an unchallenged patent may deter others from attempting to compete with the licensee.[16]

Under ordinary contract principles the mere fact that some benefit is received is enough to require the enforcement of the contract, regardless of the validity of the underlying patent. Nevertheless, if one tests this result by the standard of good-faith commercial dealing, it seems far from satisfactory. For the simple contract approach entirely ignores the position of the licensor who is seeking to invoke the court's assistance on his behalf. Consider, for example, the equities of the licensor who has obtained his patent through a fraud on the Patent Office. It is difficult to perceive why good

[15] 37 CFR §§ 1.11, 1.13 (1967).

[16] Of course, the value of this second benefit may depend upon whether the licensee has obtained exclusive or nonexclusive rights to the use of the patent. Even in the case of nonexclusive licenses, however, competition is limited to the extent that the royalty charged by the patentee serves as a barrier to entry.

faith requires that courts should permit him to recover royalties despite his licensee's attempts to show that the patent is invalid. Compare *Walker Process Equipment, Inc.* v. *Food Machinery & Chemical Corp.*, 382 U. S. 172 (1965).

Even in the more typical cases, not involving conscious wrongdoing, the licensor's equities are far from compelling. A patent, in the last analysis, simply represents a legal conclusion reached by the Patent Office. Moreover, the legal conclusion is predicated on factors as to which reasonable men can differ widely. Yet the Patent Office is often obliged to reach its decision in an *ex parte* proceeding, without the aid of the arguments which could be advanced by parties interested in proving patent invalidity. Consequently, it does not seem to us to be unfair to require a patentee to defend the Patent Office's judgment when his licensee places the question in issue, especially since the licensor's case is buttressed by the presumption of validity which attaches to his patent. Thus, although licensee estoppel may be consistent with the letter of contractual doctrine, we cannot say that it is compelled by the spirit of contract law, which seeks to balance the claims of promisor and promisee in accord with the requirements of good faith.

Surely the equities of the licensor do not weigh very heavily when they are balanced against the important public interest in permitting full and free competition in the use of ideas which are in reality a part of the public domain. Licensees may often be the only individuals with enough economic incentive to challenge the patentability of an inventor's discovery. If they are muzzled, the public may continually be required to pay tribute to would-be monopolists without need or justification. We think it plain that the technical requirements of contract doctrine must give way before the demands of the public interest in the typical situation

involving the negotiation of a license after a patent has issued.

We are satisfied that *Automatic Radio Co.* v. *Hazeltine Research, Inc., supra,* itself the product of a clouded history, should no longer be regarded as sound law in respect of its "estoppel" holding, and that holding is now overruled.

B.

The case before us, however, presents a far more complicated estoppel problem than the one which arises in the most common licensing context. The problem arises out of the fact that Lear obtained its license in 1955, more than four years before Adkins received his 1960 patent. Indeed, from the very outset of the relationship, Lear obtained special access to Adkins' ideas in return for its promise to pay satisfactory compensation.

Thus, during the lengthy period in which Adkins was attempting to obtain a patent, Lear gained an important benefit not generally obtained by the typical licensee. For until a patent issues, a potential licensee may not learn his licensor's ideas simply by requesting the information from the Patent Office. During the time the inventor is seeking patent protection, the governing federal statute requires the Patent Office to hold an inventor's patent application in confidence.[17] If a poten-

[17] 35 U. S. C. § 122 (1964) provides:

"Applications for patents shall be kept in confidence by the Patent Office and no information concerning the same given without authority of the applicant or owner unless necessary to carry out the provisions of any Act of Congress or in such special circumstances as may be determined by the Commissioner."

The present regulations issued by the Patent Office unequivocally guarantee that "Pending patent applications are preserved in secrecy . . . unless it shall be necessary to the proper conduct of business before the Office" to divulge their contents. 37 CFR § 1.14 (a) (1967). The parties do not contend that Adkins' patent application was publicized by the Office during the period it was under consideration.

tial licensee hopes to use the ideas contained in a secret patent application, he must deal with the inventor himself, unless the inventor chooses to publicize his ideas to the world at large. By promising to pay Adkins royalties from the very outset of their relationship, Lear gained immediate access to ideas which it may well not have learned until the Patent Office published the details of Adkins' invention in 1960. At the core of this case, then, is the difficult question whether federal patent policy bars a State from enforcing a contract regulating access to an unpatented secret idea.[18]

Adkins takes an extreme position on this question. The inventor does not merely argue that since Lear obtained privileged access to his ideas *before 1960,* the company should be required to pay royalties accruing *before 1960* regardless of the validity of the patent which ultimately issued. He also argues that since Lear obtained special benefits before 1960, it should also pay royalties during the entire patent period (1960–1977), without regard to the validity of the Patent Office's grant. We cannot accept so broad an argument.

Adkins' position would permit inventors to negotiate all important licenses during the lengthy period while their applications were still pending at the Patent Office, thereby disabling entirely all those who have the strongest incentive in showing that a patent is worthless. While the equities supporting Adkins' position are somewhat more appealing than those supporting the typical licensor, we cannot say that there is enough of a difference

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[18] See Doerfer, The Limits on Trade Secret Law Imposed by Federal Patent and Antitrust Supremacy, 80 Harv. L. Rev. 1432 (1968); Note, The *Stiffel* Doctrine and the Law of Trade Secrets, 62 Nw. L. Rev. 956 (1968); Adelman, Trade Secrets and Federal Pre-emption—the Aftermath of Sears and Compco, 49 Journal of the Patent Office Society 713 (1967); Treece, Patent Policy and Pre-emption: The Stiffel and Compco Cases, 32 U. Chi. L. Rev. 80 (1964).

to justify such a substantial impairment of overriding federal policy.

Nor can we accept a second argument which may be advanced to support Adkins' claim to at least a portion of his post-patent royalties, regardless of the validity of the Patent Office grant. The terms of the 1955 agreement provide that royalties are to be paid until such time as "the patent . . . is held invalid," § 6, and the fact remains that the question of patent validity has not been finally determined in this case. Thus, it may be suggested that although Lear must be allowed to raise the question of patent validity in the present lawsuit, it must also be required to comply with its contract and continue to pay royalties until its claim is finally vindicated in the courts.

The parties' contract, however, is no more controlling on this issue than is the State's doctrine of estoppel, which is also rooted in contract principles. The decisive question is whether overriding federal policies would be significantly frustrated if licensees could be required to continue to pay royalties during the time they are challenging patent validity in the courts.

It seems to us that such a requirement would be inconsistent with the aims of federal patent policy. Enforcing this contractual provision would give the licensor an additional economic incentive to devise every conceivable dilatory tactic in an effort to postpone the day of final judicial reckoning. We can perceive no reason to encourage dilatory court tactics in this way. Moreover, the cost of prosecuting slow-moving trial proceedings and defending an inevitable appeal might well deter many licensees from attempting to prove patent invalidity in the courts. The deterrence effect would be particularly severe in the many scientific fields in which invention is proceeding at a rapid rate. In these areas, a patent may well become obsolete long before its 17-year term has expired. If a licensee has reason to

believe that he will replace a patented idea with a new one in the near future, he will have little incentive to initiate lengthy court proceedings, unless he is freed from liability at least from the time he refuses to pay the contractual royalties. Lastly, enforcing this contractual provision would undermine the strong federal policy favoring the full and free use of ideas in the public domain. For all these reasons, we hold that Lear must be permitted to avoid the payment of all royalties accruing after Adkins' 1960 patent issued if Lear can prove patent invalidity.[19]

C.

Adkins' claim to contractual royalties accruing before the 1960 patent issued is, however, a much more difficult one, since it squarely raises the question whether, and to what extent, the States may protect the owners of *unpatented* inventions who are willing to disclose their ideas to manufacturers only upon payment of royalties. The California Supreme Court did not address itself to this issue with precision, for it believed that the venerable doctrine of estoppel provided a sufficient answer to all of Lear's claims based upon federal patent law. Thus, we do not know whether the Supreme Court would have awarded Adkins recovery even on his pre-patent royalties if it had recognized that previously established estoppel doctrine could no longer be properly invoked

[19] Adkins suggests that any decision repudiating licensee estoppel as the general rule should not be retroactively applied to contracts concluded before such a decision is announced. Given the extent to which the estoppel principle had been eroded by our prior decisions, we believe it clear that the patent owner—even before this decision—could not confidently rely upon the continuing vitality of the doctrine. Nor can we perceive that our decision today is likely to undermine any existing legitimate business relationships. Moreover, the public's interest in the elimination of specious patents would be significantly prejudiced if the retroactive effect of today's decision were limited in any way.

with regard to royalties accruing during the 17-year patent period. Our decision today will, of course, require the state courts to reconsider the theoretical basis of their decisions enforcing the contractual rights of inventors and it is impossible to predict the extent to which this re-evaluation may revolutionize the law of any particular State in this regard. Consequently, we have concluded, after much consideration, that even though an important question of federal law underlies this phase of the controversy, we should not now attempt to define in even a limited way the extent, if any, to which the States may properly act to enforce the contractual rights of inventors of unpatented secret ideas. Given the difficulty and importance of this task, it should be undertaken only after the state courts have, after fully focussed inquiry, determined the extent to which they will respect the contractual rights of such inventors in the future. Indeed, on remand, the California courts may well reconcile the competing demands of patent and contract law in a way which would not warrant further review in this Court.

IV.

We also find it inappropriate to pass at this time upon Lear's contention that Adkins' patent is invalid.

Not only did Lear fail to raise this issue in its petition for certiorari, but the California Supreme Court has yet to pass on the question of patent validity in that clear and unequivocal manner which is so necessary for proper adjudication in this Court. As we have indicated, the California Supreme Court considered the novelty of Adkins' ideas relevant to its decision at only one stage of its extensive analysis. Since Lear claimed that it had developed its Michigan gyros completely independently of Adkins' efforts, the Supreme Court believed itself obliged to consider whether

Adkins' ideas were not "entirely" anticipated by the prior art. 67 Cal. 2d, at 913, 435 P. 2d, at 340. Applying this test, the Court upheld the jury's verdict of $888,000 on the Michigan gyros, finding that "Lear utilized the apparatus patented by Adkins throughout the period in question." 67 Cal. 2d, at 915, 435 P. 2d, at 341. In reaching this conclusion, however, the Court did express its belief that Adkins' invention made a "significant step forward" in the art of gyroscopy. 67 Cal. 2d, at 915, 435 P. 2d, at 341.

It is far from clear that the Court, in making this last statement, intended to hold that Adkins' ideas satisfied the demanding standard of invention explicated in our decision in *Graham* v. *John Deere Co.*, 383 U. S. 1 (1966). Surely, such a holding was not required by the Court's analysis, which was concerned only with the question whether Lear had benefited from Adkins' ideas in any degree. In this context, we believe that Lear must be required to address its arguments attacking the validity of the underlying patent to the California courts in the first instance.

The judgment of the Supreme Court of California is vacated and the case is remanded to that court for further proceedings not inconsistent with this opinion.

It is so ordered.

SUPREME COURT OF THE UNITED STATES

No. 56.—October Term, 1968.

Lear, Incorporated, Petitioner, *v.* John S. Adkins.	On Writ of Certiorari to the Supreme Court of California.

[June 16, 1969.]

Mr. Justice Black, with whom The Chief Justice and Mr. Justice Douglas join, concurring in part and dissenting in part.

I concur in the judgment and opinion of the Court, except for what is said in Part III, C, of the Court's opinion. What the Court does in this part of its opinion is to reserve for future decision the question whether the States have power to enforce contracts under which someone claiming to have a new discovery can obtain payment for disclosing it while his patent application is pending, even though the discovery is later held to be unpatentable. This reservation is, as I see it, directly in conflict with what this Court held to be the law in *Sears, Roebuck & Co.* v. *Stiffel Co.*, 376 U. S. 225 (1964), and *Compco Corp.* v. *Day-Brite Lighting*, 376 U. S. 234 (1964). Brother Harlan concurred specially in those cases, saying—contrary to what the Court held—"I see no reason why the State may not impose reasonable restrictions on the future 'copying' itself." *Compco, supra*, at 239. Consequently the Court is today joining in the kind of qualification that only Mr. Justice Harlan was willing to make at the time of our *Stiffel* and *Compco* decisions.

I still entertain the belief I expressed for the Court in *Stiffel* and *Compco* that no State has a right to authorize any kind of monopoly on what is claimed to be a new invention, except when a patent has been obtained

from the Patent Office under the exacting standards of the patent laws. One who makes a discovery may, of course, keep it secret if he wishes, but private arrangements under which self-styled "inventors" do not keep their discoveries secret, but rather disclose them, in return for contractual payments, run counter to the plan of our patent laws, which tightly regulate the kind of inventions that may be protected and the manner in which they may be protected. The national policy expressed in the patent laws, favoring free competition and narrowly limiting monopoly, cannot be frustrated by private agreements among individuals, with or without the approval of the State.

SUPREME COURT OF THE UNITED STATES

No. 56.—October Term, 1968.

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[June 16, 1969.]

Mr. Justice White, concurring in part.

The applicable provision of 28 U. S. C. § 1257 empowers us to review by writ of certiorari "[f]inal judgments or decrees rendered by the highest court of a State . . . where any title, right, privilege or immunity is specially set up or claimed under the Constitution, treaties or statutes of, or commission held or authority exercised under, the United States." Although Adkins disputes it, we have jurisdiction to consider whether a patent licensee is estopped to challenge the validity of the patent. The California Supreme Court ruled that he is and therefore would not entertain attacks on Adkins' patent as a defense to his suit for royalties. Lear seeks review of that holding here. In my view, not only is the issue properly here but the Court has correctly decided it.

Although we have jurisdiction to review this state court judgment and to determine the licensee estoppel issue, it does not necessarily follow that we may or should deal with two other federal questions which come into focus once the licensee is free to challenge the patent. The first is whether the patent is valid. The second, which arises only if the patent is invalidated, is whether federal law forbids the collection of royalties which might otherwise be collectible under a contract rooted in state law. Although the Court does not deal with the first issue, it does purport to decide the second, at least in part. However, as either a jurisdictional or a

policy matter, neither of these issues is properly before us in this case.

In the first place, we have no decision of the California Supreme Court affirming or denying, as a matter of federal law, that Adkins may not enforce his contract if his patent is held invalid. The California court held that the license agreement had not been terminated in accordance with its terms, that the doctrine of licensee estoppel prevented Lear from challenging the patent and that Lear was utilizing the teaching of Adkins' patent. There was thus no necessity or reason to consider whether the patent was invalid, or if it was, whether either state or federal law prevented collection of the royalties reserved by the contract. Even if these issues had been presented to the California Supreme Court, sound principles would have dictated that the court not render a decision on questions unnecessary to its disposition of the case. See, *e. g., Southwestern Bell Telephone Co.* v. *Oklahoma,* 303 U. S. 206, 212–213 (1938).

There is no indication, however, that Lear, directly or by inference, urged in the California courts that if Adkins' patent were invalid, federal law overrode state contract law and precluded collection of the royalties which Lear had promised to pay. One of the defenses presented by Lear in its answer to Adkins' claim for royalties was that there had been a failure of consideration because of the absence of bargained-for patentability in Adkins' ideas. But failure of consideration is a state law question, and I find nothing in the record and nothing in this Court's opinion indicating that Lear at any time contended in the state courts that once Adkins' patent was invalidated, the royalty agreement was unenforceable as a matter of federal law.[1]

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[1] The Court brushes aside the problem by characterizing the additional issue it decides as representing a "more complicated

Given Lear's failure below to "specially set up or claim" the federal bar to collection of royalties in the event Adkins' patent was invalidated, and without the California Supreme Court's "final judgment" on this issue, I doubt our jurisdiction to decide the issue. But even if jurisdiction exists, the Court should follow its characteristic practice and refuse to issue pronouncements on questions not urged or decided in the state courts.

In *McGoldrick* v. *Compagnie Generale Atlantique*, 309 U. S. 430 (1940), the Court, while recognizing it had jurisdiction to determine whether a New York tax was an unconstitutional burden on interstate commerce, refused to consider whether the tax was a prohibited impost or duty on imports and exports, saying: "[I]t is only in exceptional cases, and then only in cases coming from the federal courts, that [the Court] considers questions urged by a petitioner or appellant not pressed or passed upon in the courts below. . . . [D]ue regard for the appropriate relationship of this Court to state courts

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estoppel problem." But licensee estoppel, the question raised here, refers to estoppel against the licensee to challenge the patent, not to any bar or "estoppel" interposed by federal law against collecting royalties on an invalidated patent. Whether Adkins can enforce his contract for royalties if his patent is found to be invalid cannot be shoehorned into the licensee estoppel question, and by no stretch of the imagination can it be included within the scope of the question raised and litigated by the parties in this case. In the courts below Lear wanted to challenge Adkins' patent only for the purpose of showing that Adkins was entitled to no recovery under the terms of the contract itself, either because of a failure of consideration or because the contract had been legally terminated or could be legally terminated. Indeed, the District Court of Appeal noted: "Lear concedes that it would be estopped to contest the validity of any patent issued to Adkins on the claims of his application described in the license agreement so long as it continued to operate under that agreement." 52 Cal. Rptr., at —. See also Lear's Opening Brief in the District Court of Appeal, at 109.

requires us to decline to consider and decide questions affecting the validity of state statutes not urged or considered there." *Id.*, at 434.

Wilson v. *Cook*, 327 U. S. 474 (1946), reached a similar conclusion. There the Court denied a government contractor the benefit of the implied constitutional immunity of the Federal Government from taxation by the State, but at the same time declined to consider whether the state tax at issue placed a forbidden tax directly on the United States. This was because the Court was "not free to consider" a ground of attack "not presented to the Supreme Court of Arkansas or considered or decided by it," even though the issue was in some measure related to one actually decided by the state courts and arose under the same implied constitutional immunity argument. *Id.*, at 483. Compare *Dewey* v. *Des Moines*, 173 U. S. 193, 197-198 (1899). The Court relied on *McGoldrick* and a long line of prior cases, including *New York ex rel. Cohn* v. *Graves*, 300 U. S. 308, 317 (1937), where the Court had said: "In reviewing the judgment of a state court, this Court will not pass upon any federal question not shown by the record to have been raised in the state court or considered there, whether it be one arising under a different or the same clause in the Constitution with respect to which other questions are properly presented."

The result is the same when a party has attempted to raise an issue in the state court but has not done so in proper or timely fashion. "Questions first presented to the highest State court on a petition for rehearing come too late for consideration here . . . ." *Radio Station WOW* v. *Johnson*, 326 U. S. 120, 128 (1945). "Since the State Supreme Court did not pass on the question now urged, and since it does not appear to have been properly presented to that court for decision, we are without

jurisdiction to consider it in the first instance here." *CIO* v. *McAdory*, 325 U. S. 472, 477 (1945). And no different conclusion obtains when the federal question, although not yet presented to or decided by the state court, will probably or even certainly arise during further proceedings held in that court. See, *e. g.*, *NAACP* v. *Alabama*, 357 U. S. 449, 466–467 (1958); *Hudson Distributors, Inc.* v. *Eli Lilly & Co.*, 377 U. S. 386, 394–395 (1964).

Wholly aside from jurisdictional considerations or those relating to our relationships with state courts, there is the matter of our own Rule 23 (1)(c), which states that "[o]nly the questions set forth in the petition or fairly comprised therein will be considered by the court." See *Flournoy* v. *Wiener*, 321 U. S. 253, 259 (1944). None of the questions presented by Lear's petition for certiorari comes even close to the issue to which the Court now addresses itself—an issue which will arise only if Lear can and does challenge the patent, if the patent is declared invalid, if Adkins nevertheless seeks to enforce the agreement and if Lear interposes a defense based on federal law.

This seems a poor case for waiving our Rules. In the first place, the question of validity has not been reached by the California Supreme Court, and when it is, the patent may withstand attack. In that event there will be no necessity to consider the impact of patent law on the enforceability of a contract grounded in state law. Second, even if the patent is declared invalid, the state court, after the parties have addressed themselves to the issues, may accommodate federal and state law in a matter which would not prompt review here. Third, the parties themselves have neither briefed nor seriously argued the question in this Court, and we do not have the benefit of their views on what is surely a difficult ques-

tion. The Court itself has flushed the issue, which it now deals with on a piecemeal basis.[2] Like the question of patent validity, I would leave the consequences of invalidity to the state court in the first instance.

[2] The Court's opinion flatly proscribes recovery by Adkins of "all royalties accruing after Adkins' 1960 patent issued if Lear can prove patent invalidity." *Ante*, at 20. But recovery of pre-1960 royalties is left open by the Court, apparently because pre-issuance and post-issuance royalties do not stand on the same footing under federal law. Such a distinction may be valid, and pre-1960 royalties recoverable; but if so, what of post-1960 royalties which are attributable to the head-start Lear obtained over the rest of the industry as a result of pre-issuance disclosure of Adkins' idea? Today's bar to collection of post-1960 royalties would seem to be inflexible, and yet those royalties arguably are recoverable to the extent they represent payment for the pre-1960 disclosure of Adkins' idea; to that extent, they seem indistinguishable from pre-1960 royalties, at least for purposes of federal patent law. Cf. *Brulotte* v. *Thys Co.*, 379 U. S. 29, 31 (1964). See also *id.*, at 34–39 (dissenting opinion). This possibility and others serve to indicate the wisdom of refraining from any pronouncement now, and particularly from any rigid line-drawing, in advance of consideration by the courts below and by the parties.